

212088
Banbury 200
Southam Road
Banbury

SuDS Management & Maintenance Plan

February 2022

Document Control:

Revision	Date	Prepared	Checked	Approved
PL1	18/02/22	MA	ED	JL
PL2	23/02/22	MA	ED	JL

Table of Contents:

1.0	Introduction	1
2.0	SuDS Management.....	1
3.0	SuDS Maintenance	1
3.1	Manholes / Inspection Chambers.....	2
3.2	Catchpit Manholes	2
3.3	Channel Drains	2
3.4	Flow Controls.....	2
3.5	Full Retention Separator.....	2
3.6	Filter Drains	3
3.7	Attenuation Storage Tank.....	4
4.0	Spills.....	5
5.0	Health & Safety	5
6.0	Recording Maintenance	5
	Appendix A – Channel Drains	
	Appendix B – SPEL Purceptor Full Retention Separator	
	Appendix C – Wavin Aquacell Geocellular Storage	

1.0 Introduction

The foul and surface water drainage systems proposed as part of the works are shown on EirEng drawing 212088-C002. Pipe sizes and gradients are designed to be self-cleansing, although regular maintenance and inspections are required to ensure the long-term efficiency of the systems.

Any drainage infrastructure located inside the site will be the end-user's responsibility to maintain. All works shall be undertaken by suitably qualified personnel and waste shall be treated and removed by an appropriately registered waste company.

2.0 SuDS Management

Maintenance on the site would be funded by the end-user and would be managed by a maintenance management company. A specialist maintenance contractor shall be appointed to undertake maintenance of all drainage on the site for the duration of its occupancy.

Maintenance of the sewers, manholes, gullies, inlets/outlets and channel drains shall be inspected at 6 monthly intervals and cleaned out at 12 monthly intervals. A full CCTV survey shall be carried out on completion of works and at 10 yearly intervals. For the full retention separator and geocellular attenuation storage structure would be in line with manufacturer's recommendations and maintenance requirements, and in accordance with CIRIA C753 SuDS Manual.

3.0 SuDS Maintenance

The main objective of maintenance control is to establish procedures to ensure the sewer system functions appropriately in the long-term within an environment of fiscal control.

General maintenance requirements includes:

- Collect all litter or other debris and remove from site at regular intervals;
- Make visual inspections of overland flow routes and remove obstructions as required;
- Cleaning and removal of sediments and blockages to restore hydraulic capacity;
- Local repair or local replacement of damaged pipes or other structures in order to maintain the functioning of the sewer system;
- Jetting/vacuum of sewers to be undertaken as often as necessary to remove silts and/or ordinary debris. To avoid damaging the pipes, PSI pressures need to be verified before jetting of plastic twin wall sewers;
- In the event that any major issues are encountered during an inspection, further information may be required such as a CCTV survey report;
- Maintenance to be undertaken on a six-monthly schedule.

Cleaning of drainage systems may require the temporary sealing of the system and careful collection of the effluent for disposal off-site by an appropriately registered waste company.

3.1 Manholes / Inspection Chambers

All manhole covers shall be lifted, and the manholes visually inspected for silt, debris and signs of blockages within the drainage system. Inspect manhole covers and frames for damage and ensure they are correctly bolted together. This shall be undertaken on a six-monthly basis.

Should any debris or blockages be detected, the manholes shall be cleaned along with associated pipe runs which shall be high pressure jetted and CCTV surveyed to verify/identify that no further remedial works are required.

3.2 Catchpit Manholes

Catchpit manholes are designed with sumps to accumulate silt and debris at specific locations on the sewer network. These shall be inspected and cleaned out monthly or following severe storms during the first year, then on a six-monthly schedule. Catchpit manholes are identified by reference to 'Catchpit' in the manhole reference on drawing 212088-C002.

3.3 Channel Drains

Channel drains (including slotdrains and kerbdrains) shall be inspected regularly to ensure that the system continues to operate effectively and is free from damage and blockage by debris or solid objects.

The system shall be cleaned annually or when signs of loss of capacity in the channels are evident and incorporated into a planned maintenance schedule. All units to be cleaned with a high-pressure hose in accordance with specialist manufacturer's maintenance requirements. The 'ACO Maintenance Guide' and 'Gatic Slotdrain Technical Brochure' are provided in Appendix A.

3.4 Flow Controls

Remove cover to inspect and note any high-water levels, re-inspect 24hrs later to evaluate reduction of water levels. Ensure that water is flowing appropriately through the flow control device and there are no obstructions to the flow of water immediately upstream or within the device. Remove any debris and silt encountered following inspections. These should be inspected and cleaned out on a monthly basis or following severe storms during the first year, then on a six-monthly schedule.

If a blockage within the flow control unit occurs, it will need to be either jetted or replaced depending on the severity of the blockage.

3.5 Full Retention Separator

There are three different types of interceptors for differing applications and the full retention will be provided in accordance with manufacturer's recommendations.

- Bypass Separators
- Full Retention Separators
- Forecourt Separators

In order to prevent pollution, the separators need to be routinely maintained. This shall be carried out on a six-monthly basis by suitably qualified personnel. The 'SPEL Purceptor Full Retention Class 1 Separator - Operation and Maintenance' documents are provided in Appendix B.

Maintenance shall be as follows:

- All maintenance to be undertaken in accordance with separator manufacturer's instructions.
- Assess the depth of accumulated oil and silt;
- Check the condition of any coalescing device and replace as necessary;
- Service any electrical equipment, i.e. alarms or management systems;
- Physically inspect the integrity of the separator and any mechanical parts.

In the event of a spillage, the separator shall be emptied. The separator shall be emptied in the event of oil/silt level build up. All extracted waste must be removed off-site and undertaken by a registered waste company that has experience in emptying and servicing separators.

A detailed log shall be kept on-site and filled out when the separator is inspected, maintained, emptied and serviced along with any specific events relating to the system such as cleaning and spillages.

Every five years a full drain down and general inspection shall be undertaken, refilling the separator with clean water after the inspection/cleaning.

Detailed guidance on the design, construction and maintenance relating to proprietary treatment systems can be found in the SuDS Manual (CIRIA C753, 2015 as updated 2019) Chapter 14 and Guidance Document (CIRIA C768, 2017).

Maintenance Schedule	Required Action	Frequency
Routine Maintenance	Remove litter and debris and inspect for sediment, oil and grease accumulation	Six monthly or as required
	Change the filter media	As recommended by manufacturer
	Remove sediment, oil, grease and floatables	As necessary – indicated by system inspections or immediately following spills
Remedial Actions	Replace malfunctioning parts or structures	As required
Monitoring	Inspect for evidence of poor operation	Six-monthly or as required
	Inspect filter media and establish appropriate replacement frequencies	Six-monthly or as required
	Inspect sediment accumulation rates and establish appropriate removal frequencies	Monthly during first year of operation, then six-monthly or as required

3.6 Filter Drains

Regular inspection and maintenance are important for efficient operation of the filter drains. Details of the maintenance schedule, required action and typical frequencies are shown as follows.

Detailed guidance on the design, construction and maintenance relating to filter drains can be found in the SuDS Manual (CIRIA C753, 2015 as updated 2019) Chapter 16 and Guidance Document (CIRIA C768, 2017).

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Remove litter, debris and leaves (especially after leaf fall in the autumn) from filter drain surface and access chambers	Monthly or as required
	Inspect filter drain surface, inlet/outlet pipework and control systems for blockages, clogging, standing water and structural damage	Monthly during first year, then six-monthly or as required
	Inspect perforated pipework for silt accumulation, and establish appropriate silt removal frequencies	Six-monthly or as required
Occasional Maintenance	Remove or control tree roots where they are encroaching the sides of the filter drain, using recommended methods (e.g. National Joint Utilities Group 2007 or BS 3998:2010)	As required
	Remove surface geotextile and replace, and wash or replace overlaying filter medium	Five-yearly or as required
	Clear perforated pipework of blockages	As required

3.7 Attenuation Storage Tank

Regular inspection and maintenance is important for efficient operation of the AquaCell Plus-R storage system. The selected model allows for viewing channels to be created to allow for CCTV inspections as required. The 'Wavin AquaCell Product & Installation' document is provided in Appendix C.

Further to manufacturer's requirements, it is recommended that inspection is undertaken on a six monthly basis with all inspection points visually inspected for silt, debris and signs of blockages within the tank. Should any debris or blockages be detected, the tanks shall be cleaned and CCTV surveyed to verify/identify that no further remedial works are required.

Detailed guidance on the design, construction and maintenance relating to attenuation tanks can be found in the SuDS Manual (CIRIA C753, 2015 as updated 2019) Chapter 21 and Guidance Document (CIRIA C768, 2017).

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then annually
	Remove debris from the catchment surface where it may cause risks to performance	Monthly or as required
	Remove sediment from pre-treatment	Six monthly or as required

	structures and/ or internal fore-bays	
Remedial Actions	Repair/rehabilitate inlets, outlet, overflows and vents	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tank for sediment build-up and remove if necessary	Five-yearly or as required

4.0 Spills

Spills of significant amounts of chemicals, oils or fuel spills must not be washed to the drainage system. A supply of suitable absorbent materials to be kept on-site as necessary and used for any accidental spillages.

5.0 Health & Safety

The end-user shall, so far as is reasonably practical, provide and maintain systems of work that are safe and without risks to health or the environment. The systems of work shall cover all aspects of the above-ground operations, e.g. manhole locations and traffic control, to access the sewer system and all operations within confined spaces of the sewer system.

6.0 Recording Maintenance

The end-users site manager shall be responsible for recording and updating details of prior maintenance and operations, and also for scheduling future maintenance in accordance with the necessary requirements of each component of the drainage system. These records can be made available for future reference.

Appendix A – Channel Drains

ACO Water Management: Civils + Infrastructure

Uniclass L2123 + JR12 + JS10 + L71121 + L731	EPIC J3413
CI/SfB (52.5)	

ACO Maintenance Guide



ACO Maintenance Guide

Channel drainage, ACO KerbDrain® and ACO Qmax®



Introduction to the ACO Group

Throughout the world ACO branded drainage and surface water management systems are recognised for their innovative design, high quality manufacture, environmental excellence and industry leading performance.

Today the ACO Group has a research and production base that reaches across four continents. This unmatched resource pioneers the development of solutions that are tailored to individual applications, meeting the need for high performance, sustainable products that deliver optimum value throughout their operational life.



ACO Technologies plc

ACO operates as ACO Technologies plc in the United Kingdom. Founded over 30 years ago, the company has grown quickly on a reputation for design innovation and customer service.

There are now 2 divisions within ACO Technologies that serve every sector of the construction industry, providing solutions for applications as diverse as rail, highways, airports, landscaping, retail, distribution centres and environmentally sensitive projects.



To help architects, designers and contractors meet the legal requirements that now tightly control the way surface water is managed, ACO has created its unique system chain that combines a 'Surface Water Management Cycle' – Collect, Clean, Hold, Release, with the service support of Train, Design, Support and Care.

These processes enable ACO to offer a combination of product and service expertise necessary for the complete and sustainable management of surface water drainage.

Contents

Introduction to channel drain maintenance	4
Maintenance of grates	4
Access through grates	7
Access units	8
Maintenance of domestic channel systems	11
Maintenance of commercial channel systems	12
Maintenance of ACO KerbDrain®	13
Maintenance of ACO Qmax®	14
ACO Qmax® life cycle testing & other maintenance information	15



The ACO Group / www.aco.com



Introduction to channel drainage maintenance

ACO supports effective asset management in channel drainage – from site design through to life-cycle maintenance. ACO have a comprehensive range of gullies and access units for silt management, with easy access for maintenance and cleaning.

What is good channel maintenance?

Inspection routines are essential to maintain efficient performance of drainage channels and they should be carried out at frequent and regular intervals. The frequency will depend upon the location and the environment, and should be based on local knowledge, but inspections should be carried out at least once a year.

Benefits of maintenance

- ▶ Maintains the original hydraulic capacity of the drainage system
- ▶ Maintains the aesthetic appearance of a site
- ▶ Ensures safety issues for pedestrians and vehicle traffic are identified with regular inspections



Health and Safety




Contractors undertaking cleaning activities should consult the Health and Safety at Work etc Act (1974), the Construction (Health, Safety and Welfare) Regulations (1996) and EN 1829: High pressure cleaners, High pressure water jet machines-Safety requirements. The safety aspects to be addressed relating to jetting, are not limited to practices concerning high pressure water, possible infection from the drain contents, working on the highway and in some circumstances, working in confined spaces.

By giving maintenance advice, ACO accepts no liability for injury or loss caused by such activities.



Maintenance of grates

ACO grates are available in a variety of materials; ductile iron, composite, galvanised and stainless steel. Each has their own characteristic oxidisation cycle. The following information documents the expected performance of ACO grates, focusing on the four main grates, which depending on customer aesthetic standards, may require maintenance during the life of the grate types. One piece polymer channels like MonoDrain/RoadDrain/H Range do not have separate grates as the inlets are integral to the channel. This reduces the risk of stolen or incorrectly installed grate types.

	Grate Material Type			
	ACO Ductile Iron	ATec Ductile Iron	Composite	
				
Coating at delivery	Black paint	Electrochemical coating, black	No coating present, no possibility of oxidisation	
Protection achieved	Minimal protection, may require painting to retain black appearance if not frequently trafficked	High protection, may require occasional touch-ups	No possibility of oxidisation	
Possible treatments	Acrylic black paint /rust inhibitor	Acrylic black paint /rust inhibitor	N/A	
Low traffic areas	✓ Ideal*	✓ Ideal*	✓ Ideal	
High traffic areas	✓ Ideal	✓ Ideal	✓ Ideal	

*Application of paint may be preferred over time






ACO Ductile Iron

Ductile iron has long been used in outdoor drainage situations, as over time oxidation forms an insoluble graphitic layer which protects the iron from further attack. This is a natural process called patination. The structural integrity of a grating made of ductile iron will not be negatively affected by surface oxidation and the formation of a protective surface film. Areas with moderate traffic will help to buff the grates into the characteristic aged cast iron usually seen and do not require painting.

The water based paint with which ACO coat our gratings, is intended to protect the grating for a short period of time after manufacture. It is not intended to be either a long term or architectural finish. In areas of low traffic it may be preferred to apply a proprietary rust inhibitor.



Images showing stages in the process of patination. The period of oxidation depends on the environmental conditions. Photo on the right shows a stable buffed grate

Polymer*	Galvanised Steel	Stainless Steel
		
No coating present, no possibility of oxidisation	Zinc oxide coating	Inherent protection due to high grade SS
No possibility of oxidisation	High protection from oxidisation. Any materials damaged or cut to fit on site will require recoating on their cut or damaged surface	High protection from oxidisation
N/A	Galvanised metal paint	N/A
✓ Ideal	✓ Ideal	✓ Ideal
✓ Ideal	✓ Ideal	✓ Ideal

ACO ATec Ductile Iron

ACO ATec coating is a high performance finish offering superior resistance to corrosion and enhanced long term durability in demanding environments. ATec uses an electrophoretic process, which uses current to deposit organic coatings on electrically conductive parts, this is then cured at high temperatures forming a strong and durable coating. The benefit of ATec or KTL coatings is that any scratches or damage will not result in the oxidisation undercutting or spreading under the painted surface, and this results in overall lower levels of visible oxidisation.

ATec is particularly suited to low trafficked areas, or areas where high aesthetic appearance is required, as it provides an easily maintained system compared to water based surface coatings. ATec provides a chemically stable platform for the application of secondary paint finishes if preferred. In moderate traffic areas the coating will eventually wear away and form the polished ductile iron surface common to architectural ductile iron as discussed above.

ACO Stainless Steel

Stainless steel gives very high protection from oxidation due to the high grade steel used, and the use of pickle passivation process during production. Along with polymer and composite, stainless steel grates are a good choice for coastal applications where environmental salt levels are high. Stainless steel products in coastal applications will require regular cleaning to remove salt build up, and a proprietary protective coating may be advisable depending on the aesthetic required.

In most standard drainage situations stainless steel will not require any maintenance, and will retain a high standard of appearance over the life of the grate.



Maintenance of grates

ACO Galvanised Steel

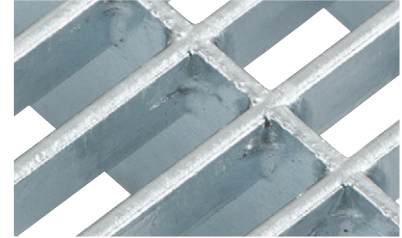
Galvanised grates are hot dipped in zinc, which gives long lasting protection from environmental effects. During the coating process the zinc reacts with the steel, giving a demarcation free transition of alloy layers.

The quality of zinc coating applied by hot dip galvanization is specified in the technical standard EN ISO 1461. For mild steel sheet material thickness > 1.5mm and < 3mm minimum local coating thickness is required to be 45 microns (to average coating thickness 55 microns). ACO's galvanised steel zinc coating can measure between 60 to 80 microns, giving extra protection to the underlying steel.

The zinc corrodes in preference to the steel in a process called sacrificial protection.

Zinc will react with the environment, creating a thin white protective layer. Damage to the coating will result in the zinc deposits resealing it from the atmosphere and therefore protecting from corrosion.

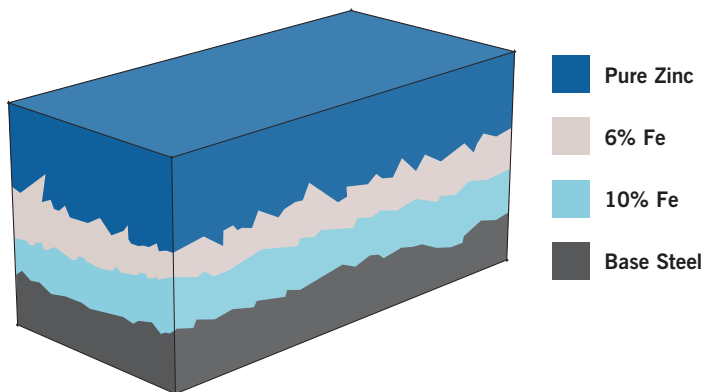
The distance of the installation from the coast will effect the level of protection achieved as the salt accelerates the oxidisation process. For more information please refer to the Galvanizers Association website: www.galvanizing.org.uk/corrosion-map/ Divide 60 microns by the microns/ year figure to get a rough estimate on the level of protection. This figure gives a guide to the maximum time before the zinc coating is oxidised due to varying levels of wear. The base metal will still be functional and may require an application of zinc based protection to retain the aesthetic.



Newly galvanised

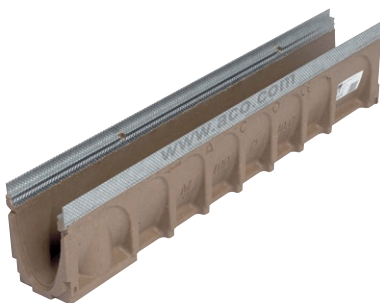


Protective oxidised layer



ACO Channel Edge Rails

Channel edge rails improve the strength and durability of grated channels, and their dimensions and performance must conform to EN1433:2002. There are three types of edge rail available, ductile iron, galvanised and stainless steel depending on the channel system chosen.



Users who wish to have the highest resistance to oxidisation should select stainless steel edged channels. These are made from 304 Stainless steel. The percentage of nickel and chromium that is present in 304 stainless steel equips this metal with good corrosion resistance, in particular from moderately caustic and acidic solutions.

Due to the wet nature of their environment and their exposure to chemicals, metal components will naturally oxidise at varying rates depending on wear. Metal edges have been selected for their long term performance, but for customers who demand specific aesthetics, maintenance may be required in the form of painting the edge rails as required. In most cases rails and grates are left untouched for the life of the product, with ACO drainage channels being renowned for their high performance.

Access through grates



Locking systems

BS EN 1433 recommends that all gratings and covers, at or above Load Class C 250, should be locked in position. ACO gratings can be secured by a variety of locking arrangements. These will vary according to the channel system, grating type and Load Class. With the exception of the heavy-duty S system, which is provided with eight bolts per metre length, gratings will generally be locked every 500mm. Part of your maintenance procedure should be to check that all grates are secure and that no bolts or locking mechanisms are missing/broken.

Current locking systems:

1. Drainlock™ bar-less locking; used in the MultiDrain range of grates
2. Bolt direct into integrally-cast frame; used in S Range channels
3. Powerlock® boltless locking system; used on some access covers

Older locking systems:

1. Quicklock® bayonet and bar boltless locking system
2. Bolt and locking bar

Grated and non-grated channel systems will have access to the channels through the sump or access unit. If access is through a grate, ensure that any security locks (where fitted) or bolts are removed prior to lifting the grate.

Bolted grates

Bolts can be removed using a spanner or socket set. Greasing or oiling bolts before refitting is suggested.

Security locks and Drainlock™

Round M6 security screws, mean that the grate has been installed with ACO's security locking system. Both of these screws need loosening before the grate can be removed

Drainlock™ systems are the standard locking mechanisms identified by black squares.

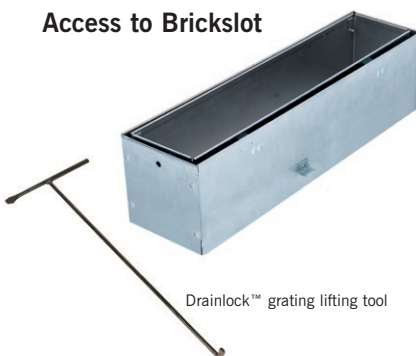
LIFTING GRATES

When lifting gratings, use the Drainlock™ grating lifting tool (part number 1367). Insert the tool in from the end of the grate as shown, and gently lift the grate until the Drainlock™ clips release taking care not to bend or damage the grate.

Lifting with/without the lifting tool at the end of a grate, may result in damage/bending of the grate (particularly the composite and steel grates). Always lift closer to the Drainlock™ clips as shown.



Access to Brickslot



To remove the ACO Brickslot access unit tray, insert two lifting tools as shown.



Then lift the tray vertically from the frame.

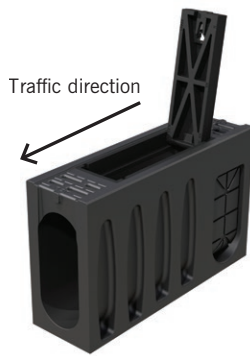
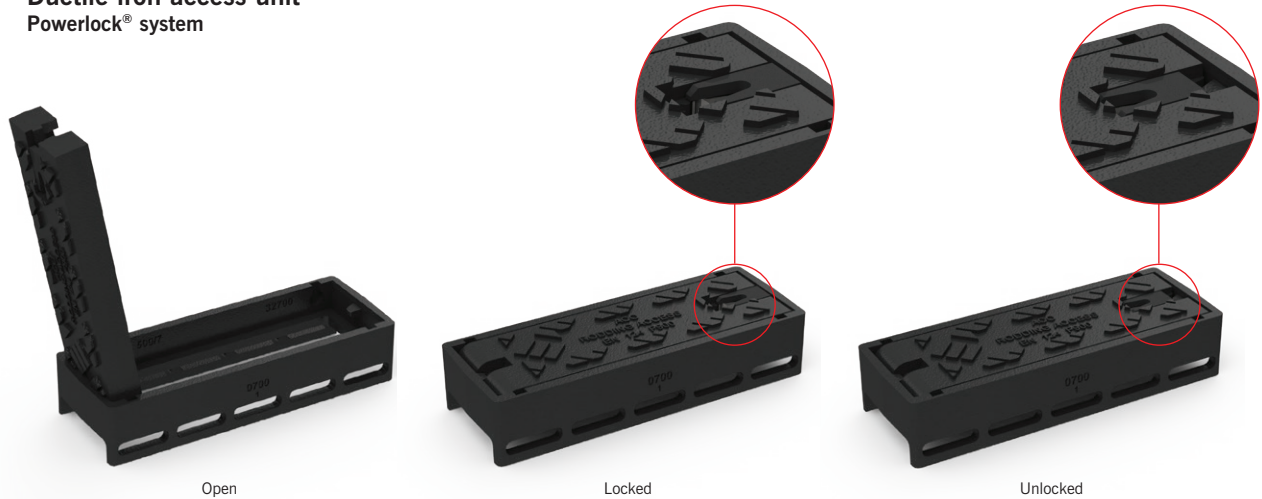
Be aware that this unit complete with surfacing material, may be very heavy and safety precautions should be taken.



Access units

Other than grates on sumps, there are two types of solid access covers, Ductile iron and Composite. Composite access units are present in all new production of MonoDrain, KerbDrain and RoadDrain.

Ductile iron access unit Powerlock® system



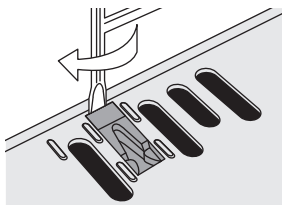
The orientation of the cover can be changed dependent on traffic direction. It is recommended the cover is orientated so that it opens against the traffic direction, please ensure that the lid is installed/replaced in the correct position and locked after use.

i Ductile iron access units were replaced by composite access units in 2018.

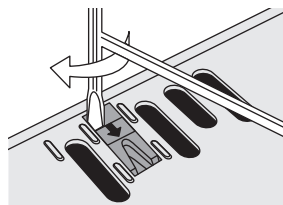


POWERLOCK

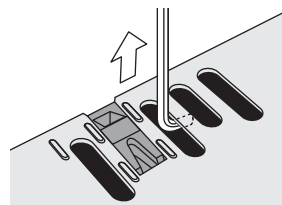
Used on the older systems, Powerlock® provides secure locking without bolts or screws and simple, rapid installation, using the ACO locking tool.



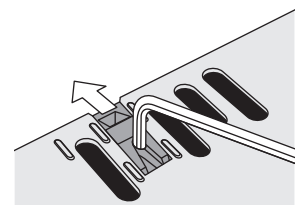
1. **To open:** slip chamfered end of locking tool into the slot behind the back of the Powerlock mechanism as shown.



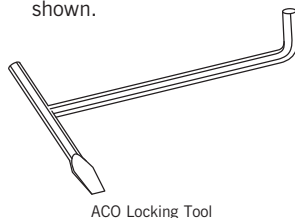
2. Rotate the tool through 90° until the lock mechanism slides across and clicks. Repeat for each lock.



3. Lift grating with the hook at the end of tool.

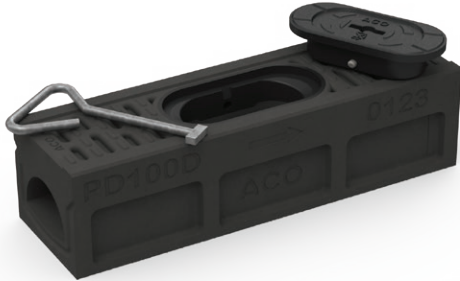


4. **To close:** fit one side of grating under lugs in channel rail and lower grating into position. Use the hook on the locking tool in the recess of the lock mechanism to push clip back towards the closed position, until a click is heard. Repeat for all locks.



ACO Locking Tool

Composite access units



MonoDrain access unit



KerbDrain access unit

COMPOSITE ACCESS UNIT - TO OPEN



1. Using a standard, medium duty drain lifting key, insert the key head through the keyway slot and press down.



2. Rotate the drain lifting key 90° - ensuring the key remains vertical.



3. Lift the key and cover as a complete unit and remove from the frame. (If you wish to remove the key, hold the cover and twist the key 90°.)

COMPOSITE ACCESS UNIT - TO CLOSE



1. If the key is still in the cover, closing is the reverse of opening. If the key is not used see above.



2. To fit the cover in the frame, simply push the cover down onto the frame - The locking pins will retract and snap into place to lock the cover.

The steel crossbar will rise to the top to identify the cover is secure.



Always ensure that access units are securely closed and locked after use.

Access through universal gullies and access chambers

UNIVERSAL GULLYS



- ▶ Universal gullies may be installed with MultiDrain, MonoDrain, RoadDrain and S Range channels.



- ▶ There are two types of ductile iron cover, the D400 version will be bolted (remove bolts before lifting), whilst the F 900 version is hinged (open as shown). Care should be taken when lifting the cover.



ACO QMAX® ACCESS CHAMBERS

- ▶ Access chambers are installed with ACO Qmax® channels. There are three types of access lid depending on the channel system installed. The covers may/may not be bolted in the corners, and these require removing prior to lifting. The cover may be hinged, and opened as shown above.

- ▶ The top of the screw should not project above the top of the tray, maximum tightening torque 18Nm.
- ▶ Removal and lifting of access covers will require on-site assessment of H&S manual handling procedures.



- ▶ Access chambers installed with ACO Qmax® Q-Slot grates will have a recessed steel cover and frame. Remove the M8 screws with an allen key, and lift out the tray using appropriate lifting method. When replacing ensure the screws are fully tightened through the tray and into the frame.



Maintenance of domestic channel systems

Channel systems which have silt buckets can use method 1 or 2, including channels with grates or Brickslot.

Alternatively method 2 can be used for grated systems with or without silt buckets. For instructions on lifting grates please refer to page 7.

Equipment needed: ACO recommend using a domestic pressure jetting machine with jetting hose attachment for method 1, or small trowel for method 2.



ACO RainDrain



ACO HexDrain Brickslot



ACO HexDrain

METHOD 1



1. Remove the grate located over the outlet or sump using an ACO Drainlock™ lifting tool (refer to page 7).
2. Remove the silt bucket, disposing of any contents and clean.
3. Return the silt bucket to the sump, this will catch any flushed out debris.
4. Insert the jetting hose, and push until it reaches the end of the channel system. Cover the channel system to prevent spray or debris damaging nearby vehicles/buildings.
5. Turn on the pressure jet machine and slowly pull out of the channel system. The jetting machine will flush debris into the silt bucket.
6. If cleaning brickslot, pressure jet down through the slot with a standard hand held attachment, and repeat the flushing of the channel.
7. Remove the silt bucket and clean.
8. Replace the silt bucket and grate.

METHOD 2



1. Remove the grates along the entire channel system using an ACO Drainlock™ lifting tool (refer to page 7).
2. Using a trowel remove any debris.
3. Empty the silt bucket if applicable.
4. Replace silt bucket and all grates.



Using boiling water or cleaning agents is not recommended. If you want to use cleaning agents, please consult the cleaning product's manufacturer for information on compatibility with the material properties.



Maintenance of commercial channel systems

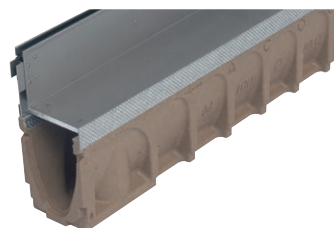
Independent of whether the channel system has grates, Brickslot or is monocast (ie one piece channel with built-in inlets) the maintenance method is the same. Access is gained through

an access unit, sump or universal gully. For instructions on lifting and locking/unlocking grates and access units please refer to page 7.

Equipment needed: ACO recommend using a recycler combination jetting unit with hydraulic winch, capable of producing pressure from 80 bar (1160 psi) to 150 bar (2176 psi).



ACO MultiDrain®



ACO MultiDrain® Brickslot



ACO MonoDrain

METHOD



1. Remove the bolts or use a lifting tool to gain access to the sump or access unit (refer page 7-8).
2. Remove the silt bucket, disposing responsibly of any contents and clean the bucket.
3. Position the jetting unit near the access unit. Introduce a 3 inch (75mm) suction hose into the sump area. This suction hose will remove the silt/detritus that the jetting hose flushes out.
4. Attach a suitable jetting head. In this example a 1 inch (25mm) diameter tandem jetting head with forward and backward facing jets was used.
5. Introduce the jet into the sump/access unit, facing the direction of channel section which is to be cleaned.
6. Activate the suction hose and jetting hose. A suitable initial jetting pressure is 80 bar or 1160 psi.
7. As the jetting head travels up the length of the channel, place boards or other suitable material over the channel grates to prevent the escape of water (spray back) and protect any vehicles or nearby property.
8. The jetting head will be propelled to the end of the channel. When it reaches the end, increase the pressure to 150 bar (2176 psi).
9. Use a hydraulic winch to pull the jetting head backwards toward the sump. The suction hose previously inserted in the sump will remove the flushed out water and detritus.
10. If a reduction of 'spray back' is required reduce the pressure to 80 bar (1160 psi). This pressure will still be sufficient to clean the channel.
11. If cleaning brickslot, pressure jet down through the slot with a standard hand held attachment, and repeat the flushing of the channel.
12. Replace the silt bucket and grate/access lid, and secure (refer pg 7-8).



ACO MultiDrain® channels incorporate Drainlock™ gratings. This is a bar-less locking device which improves hydraulic capacity and provide easier access for maintenance. Older grated channels may have a bar system for holding the gratings in place. The occurrence of these bars may restrict access to the channel. In this case reduce the size of the jetting head to gain access.



Maintenance of ACO KerbDrain®

Combined kerb drainage, ACO KerbDrain®, is maintained in very much the same way as grated or monocast systems and can be used with the same jetting equipment.

Access is gained through an access unit or gullies. ACO KerbDrain® gullies provide the outfall connection to different systems and silt management, easily accessed by a ductile iron cover.

Equipment needed: ACO recommend using a recycler combination jetting unit with hydraulic winch, capable of producing pressure from 80 bar (1160 psi) to 150 bar (2176 psi).



ACO KerbDrain® splayed access unit



ACO KerbDrain® half battered gully



ACO KerbDrain® half battered access unit

METHOD



1. Remove access unit top.
2. Position the jetting unit near the access unit or gully.
3. Attach a suitable jetting head and insert into access unit, towards the direction of travel. In this example a 1 inch (25mm) diameter tandem jetting head with forward and backward facing jets was used.
4. Introduce a 3-6 inch (75-150mm) suction hose into the adjacent gully/outlet.
5. This suction hose will remove the silt/detritus that the jetting hose flushes out.
6. Activate the suction hose and jetting hose. A suitable initial jetting pressure is 80 bar or 1160 psi.
7. As the jetting head travels up the length of the channel, place boards or tarpaulin over the channel openings to prevent the escape of water (spray back) and protect any vehicles or nearby property. Alternatively reduce the pressure to prevent spray back (high pressure, pictured above).
8. The jetting head will be propelled to the end of the channel or a determined length. When it reaches the end, increase the pressure to 150 bar (2176 psi).
9. Use a hydraulic winch to pull the jetting head backwards toward the access unit. The suction hose previously inserted in the gully/outlet will remove the water and detritus.
10. If a reduction of 'spray back' is required reduce the pressure to 80 bar (1160 psi). This pressure will still be sufficient to clean the channel.
11. When cleaning is completed, remove hoses and secure all gratings and covers.



Maintenance of ACO Qmax® channels

ACO Qmax® high capacity slot drainage is accessed through the large combined access and silt chambers and jets in a similar way to standard channel systems.

Equipment needed: ACO recommend using a recycler combination jetting unit with hydraulic winch, capable of producing pressure from 80 bar to 150 bar (2176 psi).



ACO Qmax® channels

METHOD



ACO Qmax® maintenance demonstration images taken from ACO lifecycle testing event

1. Access to ACO Qmax® channels is gained through the access and silt chambers (picture shows chamber without metal cover or frame). See page 10 for more information on ACO Qmax® access units.
2. Position the jetting unit near this access chamber to allow a 3-6 inch (75-150mm) suction hose to be introduced. This suction hose will remove the silt/detritus that the jetting hose flushes out.
3. Attach a suitable jetting head. In this example a round headed 'bullet' jet (15cm length 8cm diameter) was used for ACO Qmax® 225 with rear facing jets. The larger ACO Qmax® 500 was jetted with a 'bomb' jet (40cm length 12cm diameter) with rear facing jets.
4. Introduce the jet into the channel, facing the direction of travel.
5. Activate the suction hose and jetting hose. A suitable initial jetting pressure is 80 bar or 1160 psi.
6. As the jetting head travels up the length of the channel, place boards over the channel inlets to prevent the escape of water (spray back) and protect any vehicles or nearby property.
7. The jetting head will be propelled to the end of the channel. When it reaches the end, increase the pressure to 150 bar (2176 psi).
8. Use a hydraulic winch to pull the jetting head backwards toward the access chamber. The suction hose previously inserted in the access unit will remove the water and detritus.
9. If a reduction of 'spray back' is required reduce the pressure to 80 bar (1160 psi). This pressure will still be sufficient to clean the channel.
10. After cleaning is complete, replace cover and secure in place.



ACO Qmax[®] life cycle testing & other maintenance information

ACO Qmax[®] life cycle testing



Extensive testing was overseen and reported by Vine Technical Services Ltd, who documented the results of pressure jetting ACO Qmax[®] channels.

ACO Qmax[®] channels are extremely strong and robust, able to withstand maximum pressure 150 bar (2176 psi) [maximum pressure UK industrial pressure jetting machine]. This pressure was applied to the surface of the channel for two minutes at a distance of 5mm, resulting in no damage to the channel [Test method according to Water Industry Standard 4-35-01]. The only visible sign of this rigorous testing was in some cases a faint superficial scuff



mark, some tests resulted in no visible signs at all. Vine Technical Services Ltd concluded "The results showed that a maximum pressure of 150 bar or 2176 psi caused no damage (as defined in Water Industry Standard 4-35-01) to the ACO Qmax[®] 225 or 550 channel bodies during the maximum pressure testing".

ACO Qmax[®] channels have also been subjected to life cycle maintenance tests, to replicate twenty years of annual cleaning. Abrasive material was introduced along the length of ACO Qmax[®] channels (ACO Qmax[®] 225 and 550) and pressure jetted along its length. At the end of



this 20 test cycle the internal surfaces of the channels were inspected by Vine Technical Services Ltd who reported "The introduction of sand to replicate sediment build up within channel bodies did not cause any visible signs of damage to the inside of the channel bodies' surface".

ACO Qmax[®] channels robust material and innovative design will provide long term solutions for surface water drainage, and regular pressure jetting will not affect the structural integrity of the product, when our maintenance guidelines are followed.

Other important information

Using boiling water or cleaning agents is not recommended. If you want to use cleaning agents, please consult the cleaning product's manufacturer for information on compatibility with the material properties.

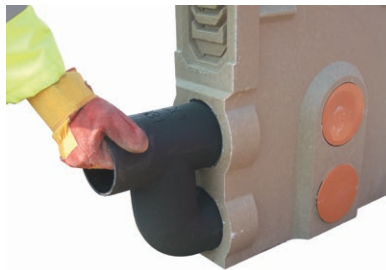
When conducting maintenance, channels and grates should be inspected for damage. Grating slots and exposed edges of channels should be examined, and ensure that locking mechanisms and bolts are tight.

Sumps and sump bucket

Each site has different levels of debris and leaf matter which will be collected by the sump bucket during rain events. The frequency for inspecting your sumps or gullies will depend on these factors. Inspection of sumps/gullies should be carried out in conjunction with an inspection of the underground drainage connection out of the channel system. Occasionally, water should be poured into the sump (or gully) to check that it disperses freely.

Maintenance of connecting drains

ACO's sumps may be connected to a roddable foul air trap or directly to a straight connector pipe, either option will provide an access point to the connecting drains.



View of foul air trap before installation



The use of an ACO roddable foul air trap with an ACO sump allows the pipe system to be accessed and maintained. Simply remove the top bung to gain access. When you have completed your maintenance, replace the bung.

Maintenance of sealed joints

In installations such as petrol stations channel sealing joints should be inspected routinely, to check they are functional and that the sealing material has not become dislodged.

Where necessary the joint sealant should be removed and replaced in accordance with the relevant manufacturer's instructions.



ACO Technologies plc

- ACO Water Management
Civils + Infrastructure
Building + Landscape
- ACO Building Drainage
- ACO Sport
- ACO Wildlife

**ACO Water Management:
Civils + Infrastructure**

A division of ACO Technologies plc
ACO Business Park,
Hitchin Road,
Sheffield,
Bedfordshire
SG17 5TE

Tel: 01462 816666
Fax: 01462 815895

e-mail Sales: customersupport@aco.co.uk
e-mail Technical: technical@aco.co.uk

website: www.aco.co.uk

ACO. creating the future of drainage

© May 2019 ACO Technologies plc. 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 of use are suitable. This brochure and any advice is provided by ACO Technologies plc (the Company) free of charge and accordingly on terms that no liability including liability for negligence will attach to the Company or its servants or agents arising out of or in connection with or in relation to this brochure or any such advice. Any goods supplied by the Company will be supplied solely upon its standard conditions of sale, copies of which are available on request. The Company's policy of continuous product development and improvement renders specifications liable to modification. Information provided in this brochure is therefore subject to change without prior notification.

ACO CARES ABOUT THE ENVIRONMENT
Printed on material approved by the Forest Stewardship Council (FSC) who provide a means of assuring that products come from responsibly managed forest.



ISO 9001
FM 13502



ISO 14001
EMS 538781



OHSAS 18001
OHS 524145

GATIC

DRAINAGE & ACCESS COVERS

Uniclass

L217241

CI/SfB

(99.64)

Xh

June 2021

Surface Water Drainage Slotdrain

Technical Brochure



ALUMASC

WATER MANAGEMENT SOLUTIONS





Rain to drain solutions that set the standard for urban water management

Alumasc is a UK-based supplier of premium building products. The majority of the group's business is in the area of sustainable building products which enable customers to manage energy and water use in the built environment.

Alumasc Water Management Solutions provide 'Rain to Drain' solutions, that set the standard for urban water management. They include: **Skyline** Fascias, Soffit & Copings; **Alumasc Rainwater** Gutters & Downpipes; **Harmer** Building Drainage; **Wade** Building Drainage and **Gatic** Drainage & Engineered Access Covers.

Under the AWMS banner, customers benefit from rainwater and drainage products that capture, retain and control the flow of rainwater in the most effective way inside and outside buildings.



Best Service	6 - 7
Quality and the Environment	8
Loading class	9
Applications	10 - 11
Slotdrain Range Overview	14 - 15
Product Selector	16 - 20
CastSlot	22 - 25
UltraSlot	26 - 29
PaveSlot	30 - 31
FacadeSlot	32 - 33
Boxes	34 - 37
Flow Regulators	36
Accessories	38 - 39
Drainage System Design	41
Water Storage & Flow Regulation	42
Design Formulae	44
Channel Configuration	46
Specification Clause	47
Structural Design	48
Steel Reinforcement	49

www.alumascwms.co.uk

Best Service

Technical Support

Gatic's wide range of slot drains is backed by the fastest technical response and the most extensive support. Our hands-on approach ensures customers get the best support every step of the way, from technical design through to installation. Our technical team is also accessible for site visits.

Design service available

We aim to turn around the design of drainage systems based on your drainage layout, complete with quantities and delivery time scales, within 24 hours.

FREE Drainage Design Software

This interactive software allows you to design your own drainage system using the same programme as our in-house technical team. For a USB containing this free software, simply register your details with us. You can do this on the Knowledge section of our website, or by emailing / phoning us. Download from our website at:

www.alumascwms.co.uk

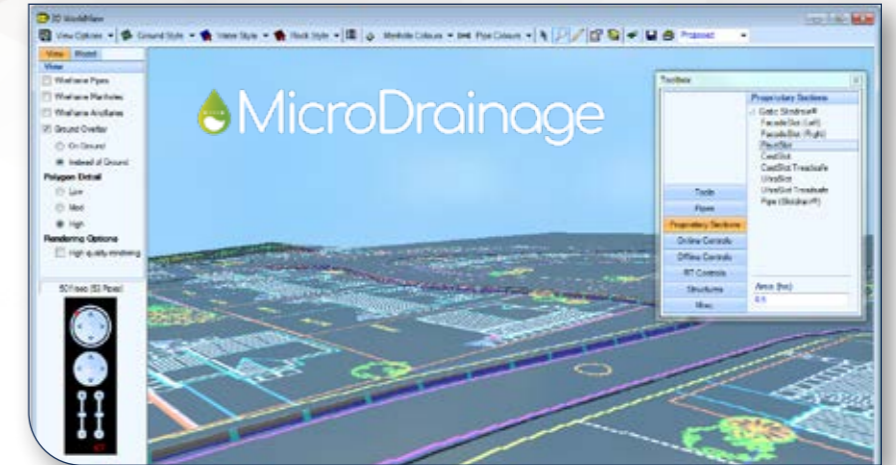


BIM Compliance with MicroDrainage Software

We have added our highly specified range of Slotdrain channels to Innovyze's MicroDrainage software.

MicroDrainage is a well-recognised tool for civil engineers working on surface water and external drainage calculations. It is the industry standard software for the detailed design of fully integrated storm-water and foul-water drainage systems. Users of MicroDrainage benefit from a user-friendly interface, auto-design and optimisation as well as formal reporting and outputs.

Along with the usual functionality, MicroDrainage can be embedded within Autodesk's Civil 3D software through the DrawNet(CAD) interface. This enables MicroDrainage to conduct intelligent data exchange through the use of Parts Lists, include Gatic Slotdrain Civil 3D, providing engineers with an ability to quickly, accurately and confidently exchange information between models, helping to achieve BIM Level 2 compliance.



Designing Gatic Slotdrains in System 1 using spreadsheet format

CPDs

We also offer CPD presentations at your premises covering all aspects of surface water drainage. Our presentations are accredited by the CPD Certification Service and count towards the continuing personal and professional development of attendees. It's a factor worth bearing in mind for those individuals seeking professional membership.

The CPD presentations currently available are Innovative Surface Water Drainage Design and Access Covers.

Visit www.alumascwms.co.uk for more information or to book your place.

NBS Plus

Our technical product information is included in this dedicated library of manufacturers' product information, contained within the UK's industry leading specification products NBS Building, NBS Landscape, NBS Engineering Services and NBS Scheduler.

Products listed in NBS Plus are directly linked to specific clauses and can be imported instantaneously into a specification. NBS Plus contains over 20,000 product specifications and is updated regularly, so designers can be confident that they are always referencing the very latest product information.

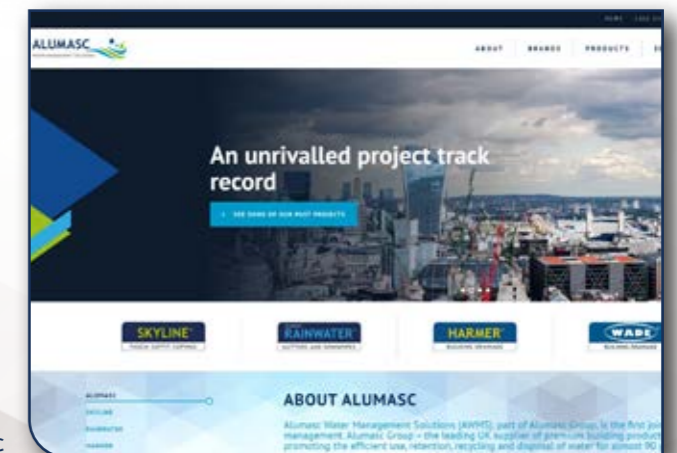
Links of all Gatic products on the NBS Plus Product Register are available on our website.

www.gatic.com

Our website now contains even more technical information and guidance than before. We have increased our online resources and improved the website design so you can now find all the technical information you need for your projects easily and quickly.

Within each product range, you can explore features and benefits, technical details, graphics, diagrams, and case studies.

By setting up a MyGatic account (registering your name and email address), you can store all the literature, technical specifications and images that you have collected while browsing, and access them again anytime from your MyGatic page simply by logging in.



Quality & Environment



Our products have been tested in accordance with recognised standards, providing reassurance to industry professionals that our channel systems have proven performance. These include:

- Quality Management Systems ISO 9001 - the recognised standard for the improvement of product, process and service quality.
- European Standard EN 1433 'Drainage Channels for Vehicular and Pedestrian Areas' - the only internationally recognised standard written specifically for trench drainage and slot drain systems. This uses the load classifications between A15 and F900.

Sustainability and the environment

Gatic is focused on providing effective solutions that enhance sustainability in the built environment. We are committed to adopting environmentally sound business practices throughout our operations and are well positioned to benefit from

Quality Assurance

Gatic Slotdrain channels have been tested in accordance with recognised standards, providing reassurance to industry professionals that the system is fit for purpose. The system has proven performance, having been used successfully for many years on a variety of project types in many locations around the world.

Load Testing Standards

The only internationally recognised standard written specifically for trench drainage and slot drain systems is the European Standard BS EN 1433:2002 'Drainage Channels for Vehicular and Pedestrian Areas'. This uses the load classifications between A15-F900, as listed in the table below.

Load Tests

Gatic Slotdrain channels have been independently load tested up to F900 load class (depending on the system type) in compliance with the European Standard BS EN 1433. Certificates of conformity are available upon request.

Watertight Slot Channels

Gatic Slotdrain has been independently tested for 'watertightness' and complies with the European Standard EN 1433 'Drainage Channels for Vehicular and Pedestrian Areas' - when installed within a channel concrete encasement/surround according to manufacturer's details.

environmentally-driven changes in policy and regulation. In particular, the growing awareness of sustainability and life-cycle cost among building and construction specifiers.

We work to the following standards:

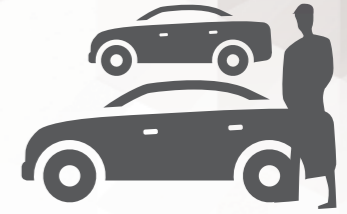
- **BREEAM** - the world's foremost environmental assessment method and rating system for buildings. Design teams use BREEAM as a method to improve the performance of their buildings and their own experience and knowledge of environmental aspects of sustainability. Gatic's channels have been used on a number of projects associated with BREEAM.

Sustainable

Gatic Slotdrain is mechanically assembled, which eliminates welding and minimises energy usage in the manufacturing process. A significant proportion of the raw materials used are from recycled sources. Slotdrain is manufactured from sheet steel and is 100% recyclable.



Load Class



A15
Light Duty

B125
Pavements
Driveways

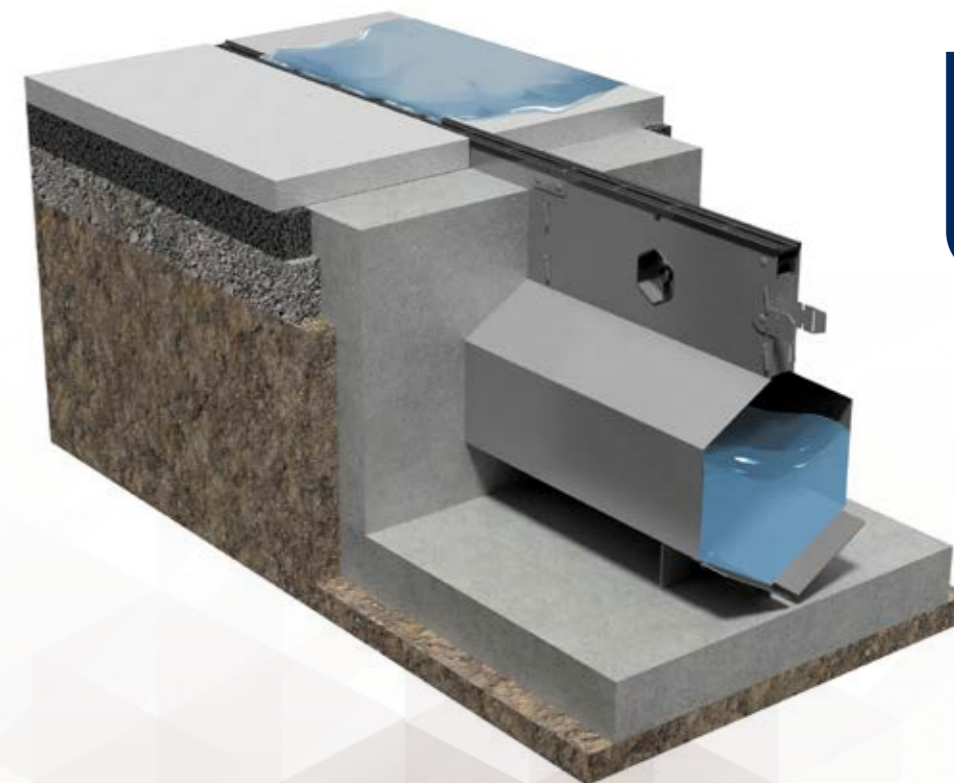
C250
Heavy pedestrian
Light Duty Commercial



D400
Slow moving
light duty vehicles

E600
Industrial areas
Light duty vehicles

F900
Heavy Duty
Airports, Docks



Slotdrain - Highly efficient surface water drainage for all applications, from airports to distribution hubs and urban landscaping.

Applications

Our market leading range of surface water drainage ensures we can provide the best solution for your commercial or domestic projects. Below is a summary of the various applications our range covers.

In a climate where we are experiencing more frequent and extreme rainfall, it is increasingly important our roads, pavements, motorways and other similar infrastructure are protected from the build up of excess rainwater. All our products are designed to manage the discharge of surface water efficiently and effectively.



Landscaping and Pedestrian Schemes

Landscaping and pedestrian schemes include domestic driveways and paved areas. For these projects the aesthetics and design of the slot drain is important to ensure it is discreet and fits seamlessly with the surrounding environment.



Car Parks

In car parks, slow turning traffic and a constant flow of vehicles make for a demanding and harsh environment for any surface water drainage system. Strength and durability of the slot or channel drain are essential in these high traffic areas.



Highways and Motorways

Highways and motorways are under constant strain from heavy traffic and vehicles of various sizes. It's important the surface drainage can manage large volumes of rainfall so that the road remains free and safe from excess water.



Distribution Yards and Industrial Units

Distribution yards and industrial units typically have large surface areas to drain and must cope with heavy loads manoeuvring on a daily basis.



Shopping Centres and Retail Parks

Shopping centres and retail parks need unobtrusive but effective drainage to maintain an attractive environment. Looks, style and performance are all important characteristics for these projects.



Petrol Stations and Forecourts

Petrol stations and forecourts mean wide open spaces and constant weight of traffic. Robustness of the slot or channel drain is essential.



Bus Terminals

Bus terminals and public transport facilities place heavy demands on surfaces and infrastructure. Strength and reliability are key criteria.



Container Ports and Distribution Yards

Container ports and distribution yards are extremely hostile environments, pounded continuously by tractor and trailer units. Our robust range of slotdrain systems have been specifically developed with this in mind.



Ports and Docks

Large ports and dock facilities are occupied by heavy, slow moving cranes that place high demands on the surface drainage. Only products with the highest specification are fit for this purpose.



Airports

Airports around the world are seeing movements increase year-on-year and aircraft weights reaching new heights. With super jumbos like the Airbus A380, airside drainage is ever more of a challenge.



DRAINAGE & ACCESS COVERS

GATIC® Slotdrain

A highly efficient surface water drainage for all applications, from airports to shopping centres and urban landscaping.



Our core business has traditionally been driven by our success in meeting the heavy demands of the world's major ports and airports. Gatic's Slotdrain* hexagonal channel profile was originally developed in conjunction with industry professionals from the airport sector.

The concept has proved infinitely scalable and has been developed into a comprehensive range of products suitable for smaller projects such as landscaping schemes, shopping developments and parking facilities.

The current Slotdrain range consists of **CastSlot**, **UltraSlot**, **PaveSlot** and **FacadeSlot** for total design flexibility, and includes complementary accessories. All channels are manufactured in 3 metre, 1 metre and 0.5 metre lengths of galvanised steel, benefitting from fewer joints and improved flow performance.

Bespoke units are available on request to suit specific design requirements and are also available in stainless steel grades 304 & 316

Gatic Slotdrain channels are suitable for applications up to F900 (depending on the system type). The hexagonal profile ensures our systems can handle everything from a rain drop to a rainstorm with similar efficiency. The V-shaped channel base aids a self-cleansing flow, and a tapered throat helps prevent blockages.

***Patented**

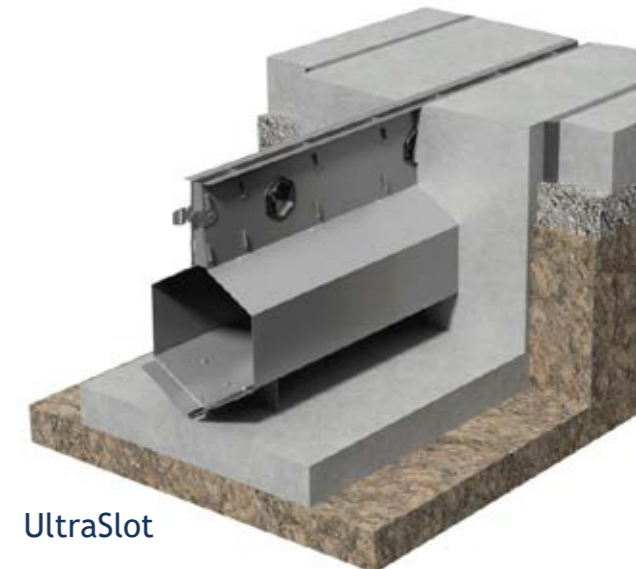


FacadeSlot

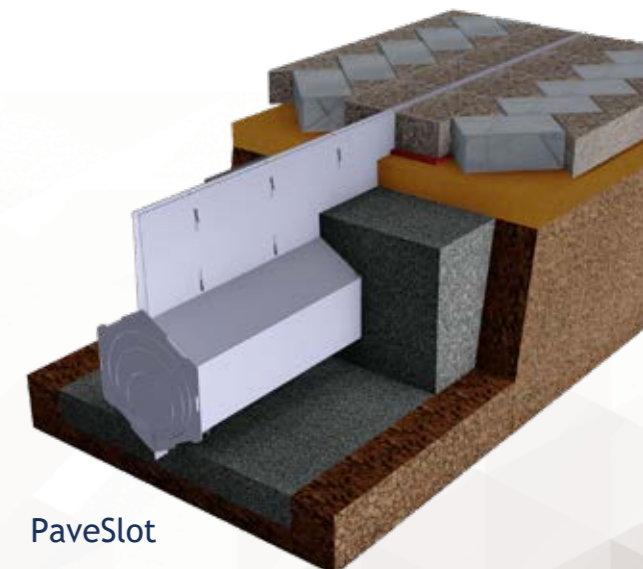
Slotdrain Overview



CastSlot



UltraSlot



PaveSlot

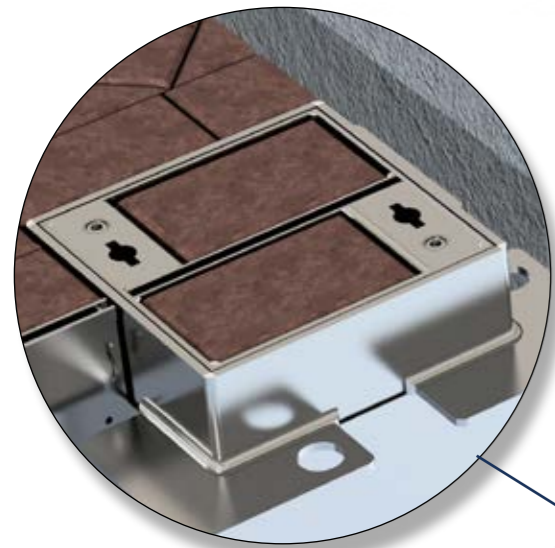
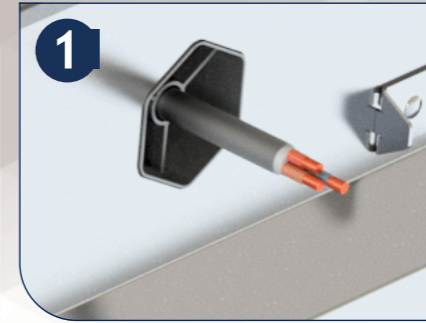


Site Work and Maintenance Guide

Our illustrated literature includes advice and general information on safe handling, installation and maintenance of our Slotdrain products. This can be downloaded from our website www.gatic.com. Alternatively, email or phone us to request a copy.

Spacer Design

Gatic's new through spacer gives designers the flexibility to pass cables or other services through the channel throat as well as detail additional reinforcing for CastSlot and UltraSlot products.



Modular Boxes

Discreet PaveSlot Top
Neat aesthetics

Tapered Throat
Helps prevent blockages

End Caps
Available with preformed circular outlet knock-outs

Longitudinal Drainage Slot
10mm wide PaveSlot

V-Shaped Channel Base
Aids a self-cleansing flow

Access / Outlet Box / Silt Box

Longitudinal Drainage Slot
2 x 10mm wide UltraSlot Treadsafe

Longitudinal Drainage Slot
30mm wide UltraSlot

Longitudinal Drainage Slot
30mm wide CastSlot

Hexagonal Channel

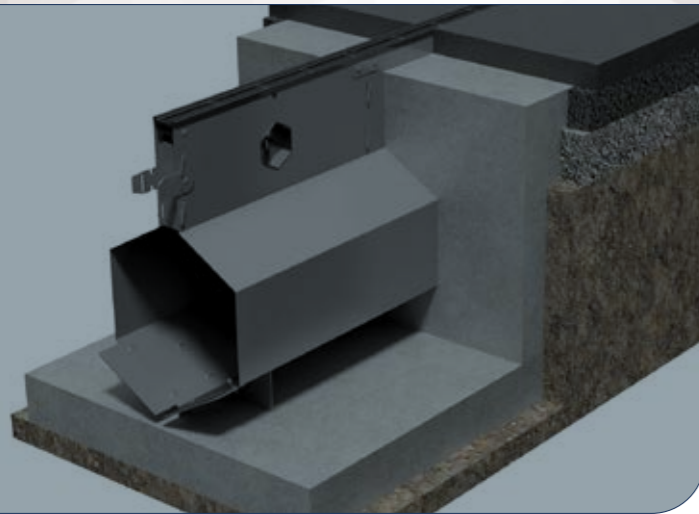
Longitudinal Drainage Slot
2x10mm Wide CastSlot Treadsafe

Channel Feet

Drop Connector

Gatic Slotdrain channels lock together to ensure alignment and a tight fit prior to taping and pouring





Gatic CastSlot and CastSlot Treadsafe

The unobtrusive profile of CastSlot sits neatly within concrete, asphalt and block surface finishes.

CastSlot features an electro painted ductile iron throat section, which is securely fixed to the galvanised steel channel body to provide an exceptionally robust yet discreet drainage system.

CastSlot is ideal for areas of vehicular traffic such as car parks and industrial units where there is slow turning traffic. Available with a 30mm opening and a Treadsafe option, which reduces the slot opening from 30mm wide to 2 x 10mm wide slots. *Protection Strips Provided.*

Load classification A15 to F900

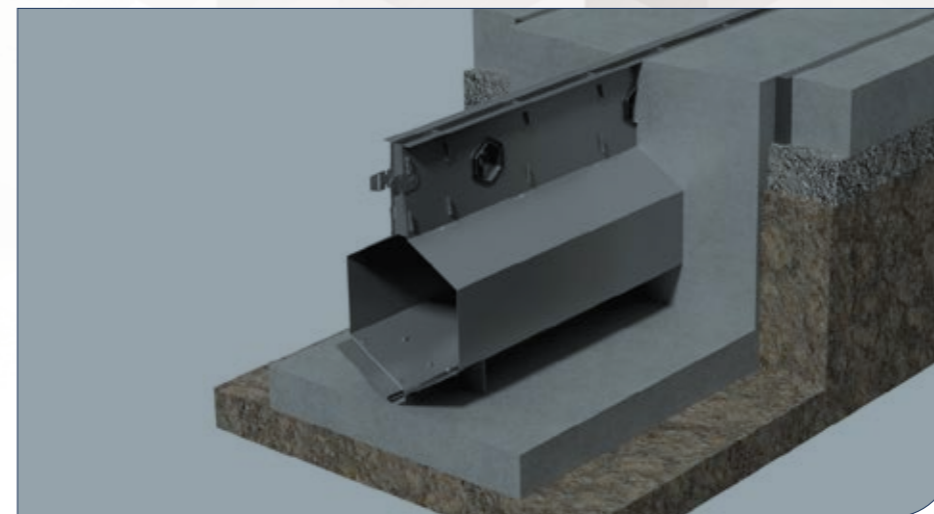


Applications:

- Landscaping and Pedestrian Schemes
- Car Parks
- Highways and Motorways
- Distribution Yards & Industrial Units
- Petrol Stations and Forecourts
- Bus Terminals
- Container Ports and Distribution Yards
- Ports and Docks
- Airports



See page28



Gatic UltraSlot and UltraSlot Treadsafe

UltraSlot is used in external pavement areas such as airports, ports, highways and similar areas. The system is designed to withstand infrequent ultra heavy-duty loads.

A Treadsafe option is available, which reduces the slot opening from 30mm wide to 2 x 9mm wide slots. This has no effect on the intake capacity of the system but will make the channel safe to cross for pedestrians.

Load classification: A15 to F900
(Protection strips available)



Applications:

- Highways and Motorways
- Airports



See page29



Gatic PaveSlot

PaveSlot is used to drain external hard surface areas where a neat, unobtrusive aesthetic is required. The system is used with paving units laid against the top edge of the channel.

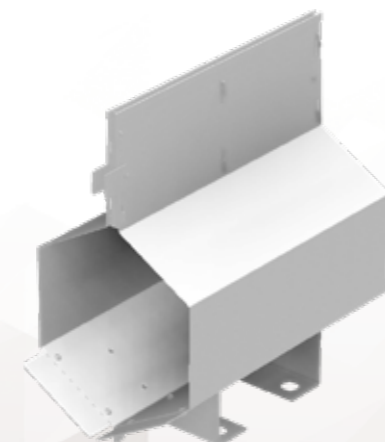
The system is suitable for all paved areas, in public and commercial projects.

Load classification: A15 to C250



Applications:

- Landscaping and Pedestrian Schemes
- Shopping Centres and Retail Parks



See page 30



Gatic FacadeSlot

A discreet surface drainage channel that can be installed against a building, wall or other external landscape feature, to provide effective drainage from vertical surfaces, door thresholds and adjacent pavement areas.

FacadeSlot channels can be made to follow the building perimeter whether straight or curved. The system can accommodate rainwater downpipes which, when positioned over a simple rainwater inlet box, can eliminate the need for a separate drainage network for the roof area, achieving a more efficient drainage system.

Load classification A15



Applications:

- Landscaping and Pedestrian Schemes
- Shopping Centres and Retail Parks
- Domestic
- Podiums



See page 31

Slotdrain product selector

Accessories

A comprehensive range of accessories is available to suit every conceivable system design.

The range of standard accessories (shown here) is available to suit all types and sizes of Slotdrain channels.

- Cover and gratings are delivered with locking bolts.



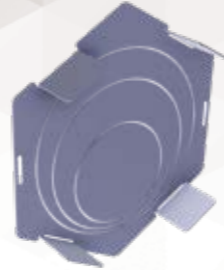
Access box - shown with grating



Access box - shown with recessed cover



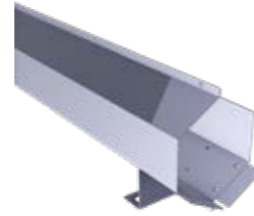
FacadeSlot Access box - with recessed cover



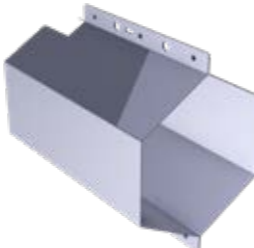
Universal end caps



Drop Connector



Channel pipes



Catchpit connectors



Flow regulators



Outlet box - shown with grating



Outlet box - shown with recessed cover



FacadeSlot Outlet box - with recessed cover



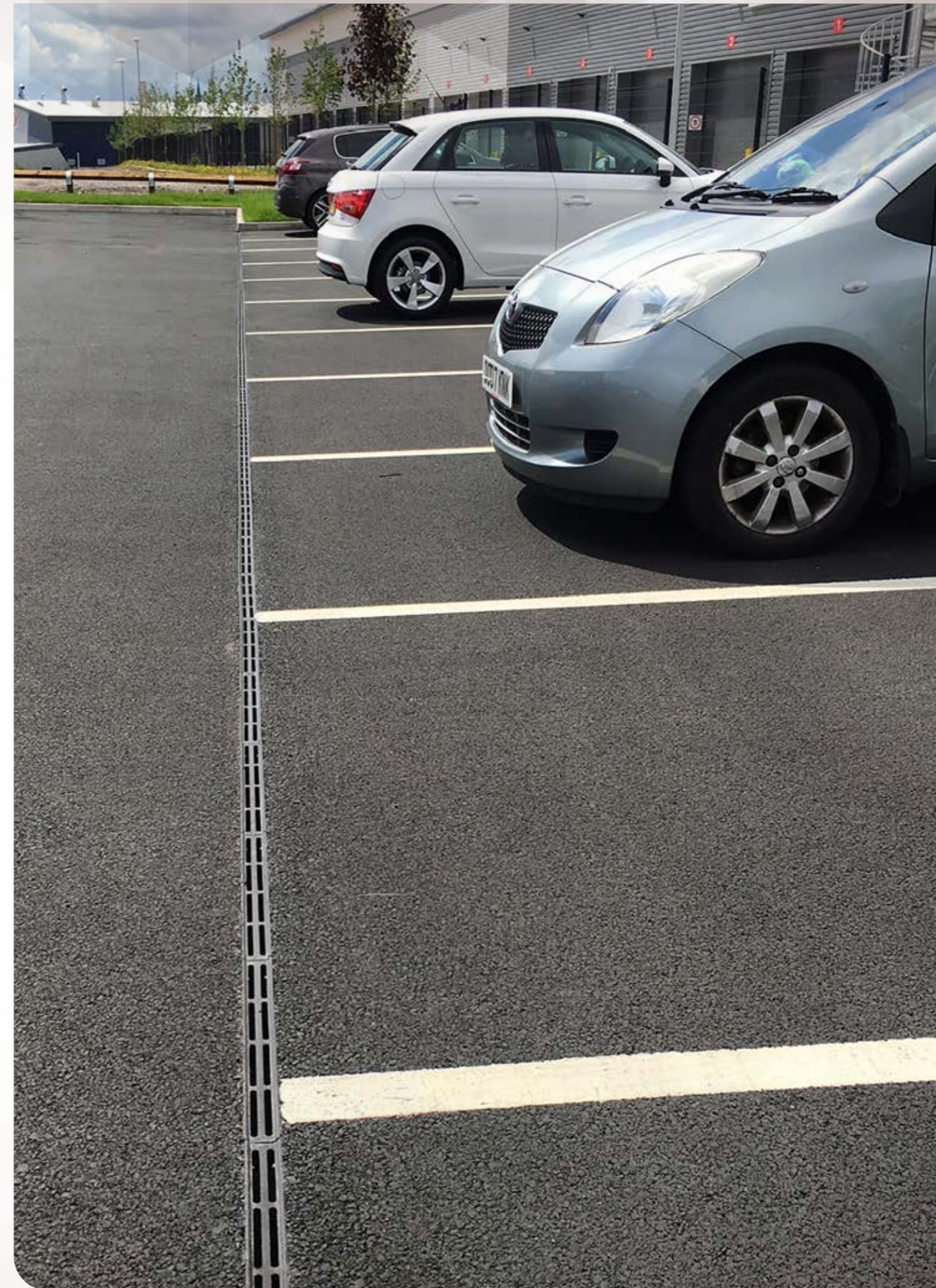
Silt box - shown with grating



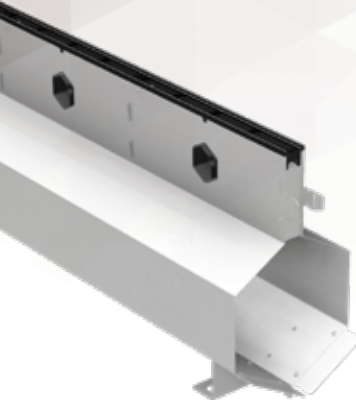
Silt box - shown with recessed cover



FacadeSlot Combined Access & Outlet box - with rainwater downpipe inlet



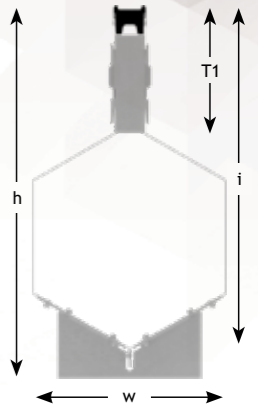
Slotdrain product selector - CastSlot



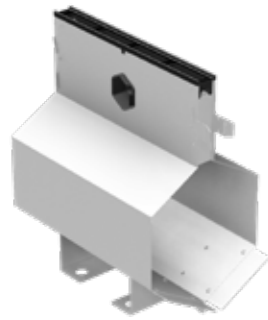
CastSlot 3m Channels

Code	Description	Load Rating			Length (mm)
		Concrete	Asphalt	Paving	
CA00225	100mm CastSlot - 3m	F900	D400	C250	3000
CA00226	150mm CastSlot - 3m	F900	D400	C250	3000
CA00227	225mm CastSlot - 3m	F900	D400	C250	3000
CA00228	300mm CastSlot - 3m	F900	D400	C250	3000
CA00229	350mm CastSlot - 3m	F900	D400	C250	3000
CA00230	400mm CastSlot - 3m	F900	D400	C250	3000
CA00231	500mm CastSlot - 3m	F900	D400	C250	3000
CA00232	600mm CastSlot - 3m	F900	D400	C250	3000

Width (w) (mm)	Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)
100	357	308	200	51	30	26350	43.3
150	415	366	200	51	30	26350	49.5
225	501	452	200	51	30	26350	59.7
300	587	538	200	51	30	26350	68.9
350	645	596	200	51	30	26350	75.1
400	712	652	200	51	30	26350	124.8
500	828	768	200	51	30	26350	145.4
600	1091	1031	200	51	30	26350	215.1

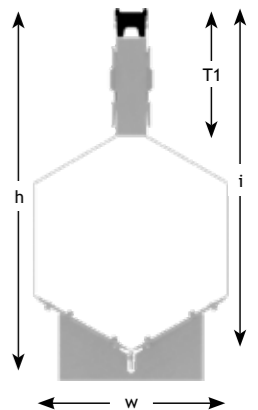


CastSlot 1m Channels

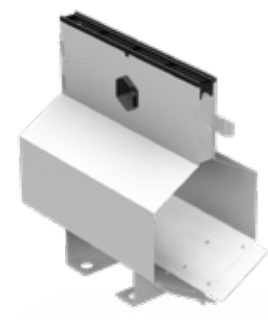


Code	Description	Load Rating			Length (mm)
		Concrete	Asphalt	Paving	
CA00233	100mm CastSlot - 1m	F900	D400	C250	1000
CA00234	150mm CastSlot - 1m	F900	D400	C250	1000
CA00235	225mm CastSlot - 1m	F900	D400	C250	1000
CA00236	300mm CastSlot - 1m	F900	D400	C250	1000
CA00237	350mm CastSlot - 1m	F900	D400	C250	1000
CA00238	400mm CastSlot - 1m	F900	D400	C250	1000
CA00239	500mm CastSlot - 1m	F900	D400	C250	1000
CA00240	600mm CastSlot - 1m	F900	D400	C250	1000

Width (w) (mm)	Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)
100	357	308	200	51	30	26350	15.2
150	415	366	200	51	30	26350	17.3
225	501	452	200	51	30	26350	21.5
300	587	538	200	51	30	26350	24.6
350	645	596	200	51	30	26350	26.7
400	712	652	200	51	30	26350	45.2
500	828	768	200	51	30	26350	52.2
600	1091	1031	200	51	30	26350	75.5

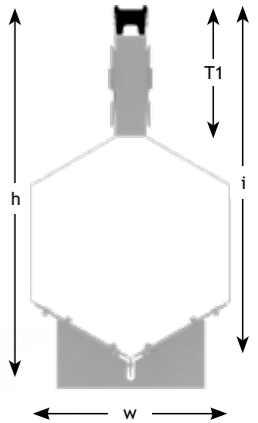


CastSlot 500mm Channels



Code	Description	Load Rating			Length (mm)
		Concrete	Asphalt	Paving	
CA00241	100mm CastSlot - 500mm	F900	D400	C250	500
CA00242	150mm CastSlot - 500mm	F900	D400	C250	500
CA00243	225mm CastSlot - 500mm	F900	D400	C250	500
CA00244	300mm CastSlot - 500mm	F900	D400	C250	500
CA00245	350mm CastSlot - 500mm	F900	D400	C250	500
CA00246	400mm CastSlot - 500mm	F900	D400	C250	500
CA00247	500mm CastSlot - 500mm	F900	D400	C250	500
CA00248	600mm CastSlot - 500mm	F900	D400	C250	500

Width (w) (mm)	Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)
100	357	308	200	51	30	26350	8.1
150	415	366	200	51	30	26350	9.2
225	501	452	200	51	30	26350	11.8
300	587	538	200	51	30	26350	13.4
350	645	596	200	51	30	26350	14.5
400	712	652	200	51	30	26350	25.3
500	828	768	200	51	30	26350	28.9
600	1091	1031	200	51	30	26350	40.6



CastSlot Drop Connectors



Code	Description
00155	100-150mm Drop Connector
00156	150-225mm Drop Connector
00157	225-300mm Drop Connector
00158	300-350mm Drop Connector
00159	350-400mm Drop Connector
00160	400-500mm Drop Connector
00161	500-600mm Drop Connector

From Channel Width (mm)	To Channel Width (mm)	Weight (kg)
100	150	0.4
150	225	0.7
225	300	1
300	350	0.9
350	400	1.7
400	500	2.7
500	600	5.9

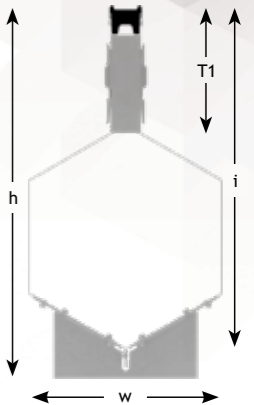


Slotdrain product selector - CastSlot (Treadsafe)

CastSlot Treadsafe 3m Channels

Code	Description	Load Rating			Length (mm)
		Concrete	Asphalt	Paving	
CAT00225	100mm CastSlot Treadsafe - 3m	F900	D400	C250	3000
CAT00226	150mm CastSlot Treadsafe - 3m	F900	D400	C250	3000
CAT00227	225mm CastSlot Treadsafe - 3m	F900	D400	C250	3000
CAT00228	300mm CastSlot Treadsafe - 3m	F900	D400	C250	3000
CAT00229	350mm CastSlot Treadsafe - 3m	F900	D400	C250	3000
CAT00230	400mm CastSlot Treadsafe - 3m	F900	D400	C250	3000
CAT00231	500mm CastSlot Treadsafe - 3m	F900	D400	C250	3000
CAT00232	600mm CastSlot Treadsafe - 3m	F900	D400	C250	3000

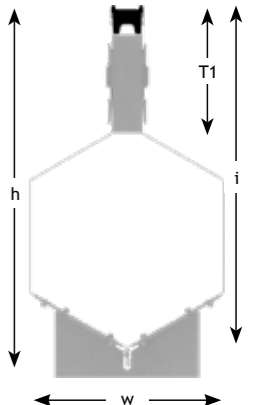
Width (w) (mm)	Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)	ght (g)
100	357	308	200	51	30	26350	43.3	.7
150	415	366	200	51	30	26350	49.5	1
225	501	452	200	51	30	26350	59.7	.1
300	587	538	200	51	30	26350	68.9	.3
350	645	596	200	51	30	26350	75.1	.6
400	712	652	200	51	30	26350	124.8	5.2
500	828	768	200	51	30	26350	145.4	5.9
600	1091	1031	200	51	30	26350	215.1	5.6



CastSlot Treadsafe 1m Channels

Code	Description	Load Rating			Length (mm)
		Concrete	Asphalt	Paving	
CAT00233	100mm CastSlot Treadsafe - 1m	F900	D400	C250	1000
CAT00234	150mm CastSlot Treadsafe - 1m	F900	D400	C250	1000
CAT00235	225mm CastSlot Treadsafe - 1m	F900	D400	C250	1000
CAT00236	300mm CastSlot Treadsafe - 1m	F900	D400	C250	1000
CAT00237	350mm CastSlot Treadsafe - 1m	F900	D400	C250	1000
CAT00238	400mm CastSlot Treadsafe - 1m	F900	D400	C250	1000
CAT00239	500mm CastSlot Treadsafe - 1m	F900	D400	C250	1000
CAT00240	600mm CastSlot Treadsafe - 1m	F900	D400	C250	1000

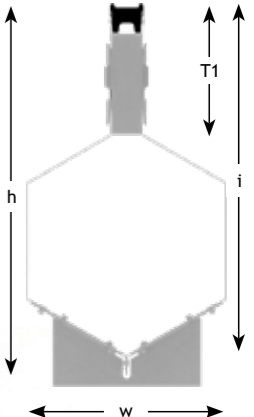
Width (w) (mm)	Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)	ght (g)
100	357	308	200	51	30	26350	15.2	.6
150	415	366	200	51	30	26350	17.3	.8
225	501	452	200	51	30	26350	21.5	.8
300	587	538	200	51	30	26350	24.6	5
350	645	596	200	51	30	26350	26.7	.1
400	712	652	200	51	30	26350	45.2	.7
500	828	768	200	51	30	26350	52.2	.7
600	1091	1031	200	51	30	26350	75.5	5



CastSlot Treadsafe 500mm Channels

Code	Description	Load Rating			Length (mm)
		Concrete	Asphalt	Paving	
CAT00241	100mm CastSlot Treadsafe - 500mm	F900	D400	C250	500
CAT00242	150mm CastSlot Treadsafe - 500mm	F900	D400	C250	500
CAT00243	225mm CastSlot Treadsafe - 500mm	F900	D400	C250	500
CAT00244	300mm CastSlot Treadsafe - 500mm	F900	D400	C250	500
CAT00245	350mm CastSlot Treadsafe - 500mm	F900	D400	C250	500
CAT00246	400mm CastSlot Treadsafe - 500mm	F900	D400	C250	500
CAT00247	500mm CastSlot Treadsafe - 500mm	F900	D400	C250	500
CAT00248	600mm CastSlot Treadsafe - 500mm	F900	D400	C250	500

Width (w) (mm)	Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)	ght
100	357	308	200	51	30	26350	8.1	
150	415	366	200	51	30	26350	9.2	
225	501	452	200	51	30	26350	11.8	
300	587	538	200	51	30	26350	13.4	
350	645	596	200	51	30	26350	14.5	
400	712	652	200	51	30	26350	25.3	
500	828	768	200	51	30	26350	28.9	
600	1091	1031	200	51	30	26350	40.6	



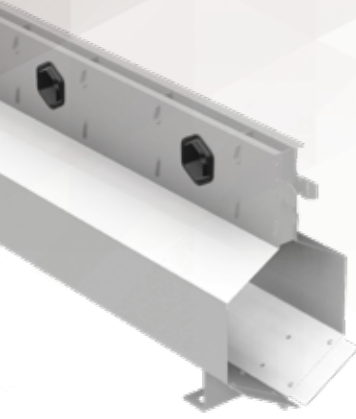
CastSlot Treadsafe Drop Connectors

Code	Description
00155	100-150mm Drop Connector
00156	150-225mm Drop Connector
00157	225-300mm Drop Connector
00158	300-350mm Drop Connector
00159	350-400mm Drop Connector
00160	400-500mm Drop Connector
00161	500-600mm Drop Connector

From Channel Width (mm)	To Channel Width (mm)	Weight (kg)
100	150	0.4
150	225	0.7
225	300	1
300	350	0.9
350	400	1.7
400	500	2.7
500	600	5.9



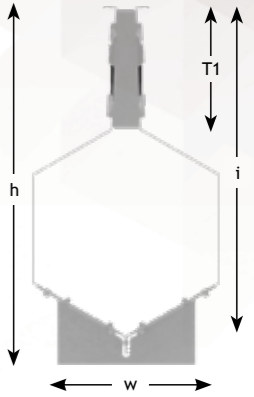
Slotdrain product selector - Gatic UltraSlot



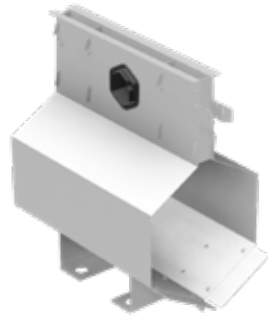
UltraSlot 3m Channels

Code	Description	Load Rating	Surface Finish	Length (mm)	Width (w) (mm)
UA00325	100mm UltraSlot - 3m	Up to F900	Concrete	3000	100
UA00326	150mm UltraSlot - 3m	Up to F900	Concrete	3000	150
UA00327	225mm UltraSlot - 3m	Up to F900	Concrete	3000	225
UA00328	300mm UltraSlot - 3m	Up to F900	Concrete	3000	300
UA00329	350mm UltraSlot - 3m	Up to F900	Concrete	3000	350
UA00330	400mm UltraSlot - 3m	Up to F900	Concrete	3000	400
UA00331	500mm UltraSlot - 3m	Up to F900	Concrete	3000	500
UA00332	600mm UltraSlot - 3m	Up to F900	Concrete	3000	600

Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)
357	308	200	70	30	30083	31.7
415	366	200	70	30	30083	37.9
501	452	200	70	30	30083	48.1
587	538	200	70	30	30083	57.3
645	596	200	70	30	30083	63.6
713	653	200	70	30	30083	114.4
829	769	200	70	30	30083	135
1091	1031	200	70	30	30083	205.4

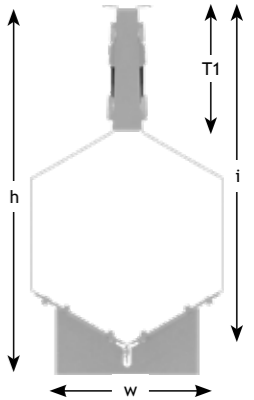


UltraSlot 1m Channels

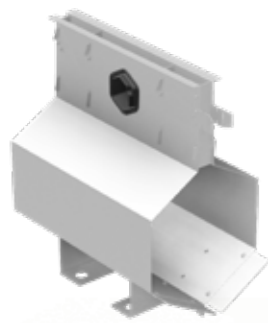


Code	Description	Load Rating	Surface Finish	Length (mm)	Width (w) (mm)
UA00333	100mm UltraSlot - 1m	Up to F900	Concrete	1000	100
UA00334	150mm UltraSlot - 1m	Up to F900	Concrete	1000	150
UA00335	225mm UltraSlot - 1m	Up to F900	Concrete	1000	225
UA00336	300mm UltraSlot - 1m	Up to F900	Concrete	1000	300
UA00337	350mm UltraSlot - 1m	Up to F900	Concrete	1000	350
UA00338	400mm UltraSlot - 1m	Up to F900	Concrete	1000	400
UA00339	500mm UltraSlot - 1m	Up to F900	Concrete	1000	500
UA00340	600mm UltraSlot - 1m	Up to F900	Concrete	1000	600

Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area Metre (mm ²)	Weight (kg)
357	308	200	70	30	30083	11.2
415	366	200	70	30	30083	13.3
501	452	200	70	30	30083	17.4
587	538	200	70	30	30083	20.6
645	596	200	70	30	30083	22.7
713	653	200	70	30	30083	41.6
829	769	200	70	30	30083	48.6
1091	1031	200	70	30	30083	72.2

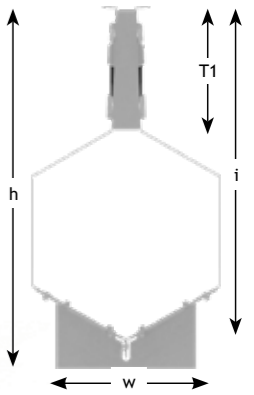


UltraSlot 500mm Channels



Code	Description	Load Rating	Surface Finish	Length (mm)	Width (w) (mm)
UA00341	100mm UltraSlot - 500mm	Up to F900	Concrete	500	100
UA00342	150mm UltraSlot - 500mm	Up to F900	Concrete	500	150
UA00343	225mm UltraSlot - 500mm	Up to F900	Concrete	500	225
UA00344	300mm UltraSlot - 500mm	Up to F900	Concrete	500	300
UA00345	350mm UltraSlot - 500mm	Up to F900	Concrete	500	350
UA00346	400mm UltraSlot - 500mm	Up to F900	Concrete	500	400
UA00347	500mm UltraSlot - 500mm	Up to F900	Concrete	500	500
UA00348	600mm UltraSlot - 500mm	Up to F900	Concrete	500	600

Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area Metre (mm ²)	Weight (kg)
357	308	200	70	30	30083	6
415	366	200	70	30	30083	7.1
501	452	200	70	30	30083	9.7
587	538	200	70	30	30083	11.3
645	596	200	70	30	30083	12.4
713	653	200	70	30	30083	23.4
829	769	200	70	30	30083	27
1091	1031	200	70	30	30083	38.8



UltraSlot Drop Connectors



Code	Description
00155	100-150mm Drop Connector
00156	150-225mm Drop Connector
00157	225-300mm Drop Connector
00158	300-350mm Drop Connector
00159	350-400mm Drop Connector
00160	400-500mm Drop Connector
00161	500-600mm Drop Connector

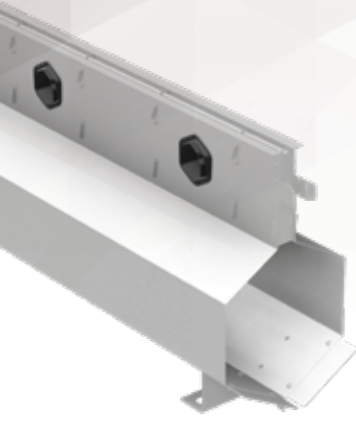
From Channel Width (mm)	To Channel Width (mm)	Weight (kg)
100	150	0.4
150	225	0.7
225	300	1
300	350	0.9
350	400	1.7
400	500	2.7
500	600	5.9



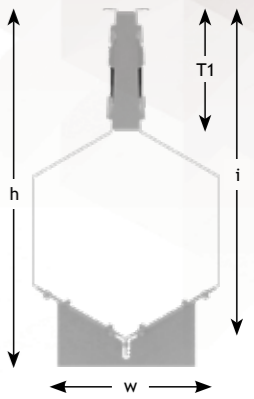
Slotdrain product selector - Gatic UltraSlot (Treadsafe)

UltraSlot Treadsafe 3m Channels

Code	Description	Load Rating	Surface Finish	Length (mm)	Width (w) (mm)
UAT00325	100mm UltraSlot Treadsafe - 3m	Up to F900	Concrete	3000	100
UAT00326	150mm UltraSlot Treadsafe - 3m	Up to F900	Concrete	3000	150
UAT00327	225mm UltraSlot Treadsafe - 3m	Up to F900	Concrete	3000	225
UAT00328	300mm UltraSlot Treadsafe - 3m	Up to F900	Concrete	3000	300
UAT00329	350mm UltraSlot Treadsafe - 3m	Up to F900	Concrete	3000	350
UAT00330	400mm UltraSlot Treadsafe - 3m	Up to F900	Concrete	3000	400
UAT00331	500mm UltraSlot Treadsafe - 3m	Up to F900	Concrete	3000	500
UAT00332	600mm UltraSlot Treadsafe - 3m	Up to F900	Concrete	3000	600

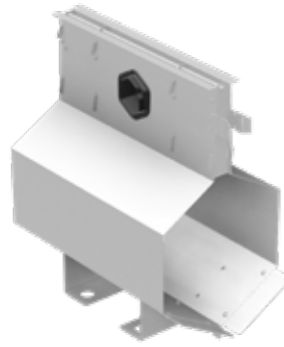


Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)
357	308	200	70	2 X 9	18079	34.5
415	366	200	70	2 X 9	18079	40.7
501	452	200	70	2 X 9	18079	50.8
587	538	200	70	2 X 9	18079	60.1
645	596	200	70	2 X 9	18079	66.3
713	653	200	70	2 X 9	18079	117.1
829	769	200	70	2 X 9	18079	137.8
1091	1031	200	70	2 X 9	18079	208.2

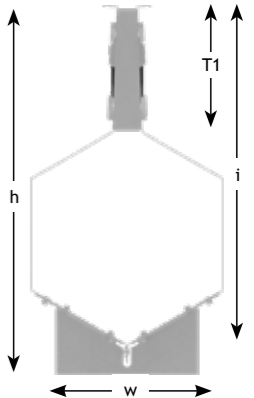


UltraSlot Treadsafe 1m Channels

Code	Description	Load Rating	Surface Finish	Length (mm)	Width (w) (mm)
UAT00333	100mm UltraSlot Treadsafe - 1m	Up to F900	Concrete	1000	100
UAT00334	150mm UltraSlot Treadsafe - 1m	Up to F900	Concrete	1000	150
UAT00335	225mm UltraSlot Treadsafe - 1m	Up to F900	Concrete	1000	225
UAT00336	300mm UltraSlot Treadsafe - 1m	Up to F900	Concrete	1000	300
UAT00337	350mm UltraSlot Treadsafe - 1m	Up to F900	Concrete	1000	350
UAT00338	400mm UltraSlot Treadsafe - 1m	Up to F900	Concrete	1000	400
UAT00339	500mm UltraSlot Treadsafe - 1m	Up to F900	Concrete	1000	500
UAT00340	600mm UltraSlot Treadsafe - 1m	Up to F900	Concrete	1000	600

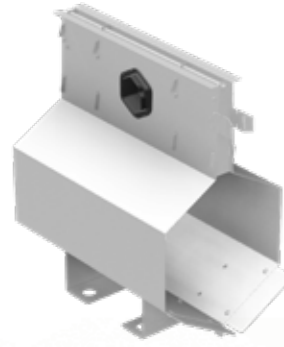


Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)
357	308	200	70	2 X 9	18079	12.1
415	366	200	70	2 X 9	18079	14.2
501	452	200	70	2 X 9	18079	18.3
587	538	200	70	2 X 9	18079	21.5
645	596	200	70	2 X 9	18079	23.6
713	653	200	70	2 X 9	18079	42.6
829	769	200	70	2 X 9	18079	49.6
1091	1031	200	70	2 X 9	18079	73.1

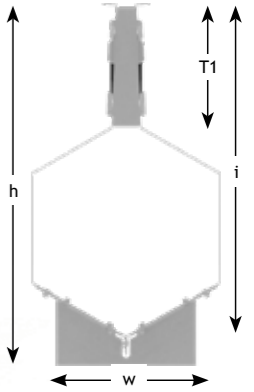


UltraSlot Treadsafe 500mm Channels

Code	Description	Load Rating	Surface Finish	Length (mm)	Width (w) (mm)
UAT00341	100mm UltraSlot Treadsafe - 500mm	Up to F900	Concrete	500	100
UAT00342	150mm UltraSlot Treadsafe - 500mm	Up to F900	Concrete	500	150
UAT00343	225mm UltraSlot Treadsafe - 500mm	Up to F900	Concrete	500	225
UAT00344	300mm UltraSlot Treadsafe - 500mm	Up to F900	Concrete	500	300
UAT00345	350mm UltraSlot Treadsafe - 500mm	Up to F900	Concrete	500	350
UAT00346	400mm UltraSlot Treadsafe - 500mm	Up to F900	Concrete	500	400
UAT00347	500mm UltraSlot Treadsafe - 500mm	Up to F900	Concrete	500	500
UAT00348	600mm UltraSlot Treadsafe - 500mm	Up to F900	Concrete	500	600



Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)
357	308	200	70	2 X 9	18079	6.4
415	366	200	70	2 X 9	18079	7.6
501	452	200	70	2 X 9	18079	10.1
587	538	200	70	2 X 9	18079	11.8
645	596	200	70	2 X 9	18079	12.9
713	653	200	70	2 X 9	18079	23.8
829	769	200	70	2 X 9	18079	27.4
1091	1031	200	70	2 X 9	18079	39.3



UltraSlot Treadsafe Drop Connectors

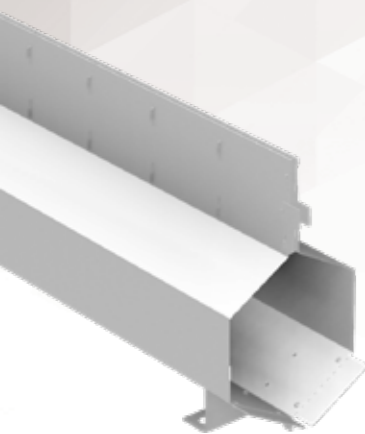
Code	Description
00155	100-150mm Drop Connector
00156	150-225mm Drop Connector
00157	225-300mm Drop Connector
00158	300-350mm Drop Connector
00159	350-400mm Drop Connector
00160	400-500mm Drop Connector
00161	500-600mm Drop Connector



From Channel Width (mm)	To Channel Width (mm)	Weight (kg)
100	150	0.4
150	225	0.7
225	300	1
300	350	0.9
350	400	1.7
400	500	2.7
500	600	5.9



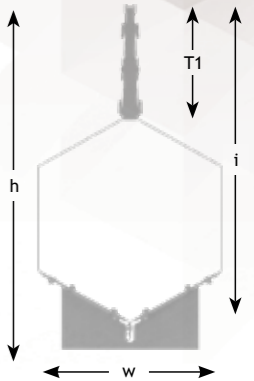
Slotdrain product selector - Gatic PaveSlot



PaveSlot 3m Channels

Code	Description	Load Rating	Surface Finish	Length (mm)	Width (w) (mm)
PA00025	100mm PaveSlot - 3m	Up to C250	Paving	3000	100
PA00026	150mm PaveSlot - 3m	Up to C250	Paving	3000	150
PA00027	225mm PaveSlot - 3m	Up to C250	Paving	3000	225
PA00028	300mm PaveSlot - 3m	Up to C250	Paving	3000	300
PA00029	350mm PaveSlot - 3m	Up to C250	Paving	3000	350
PA00192	400mm PaveSlot - 3m	Up to C250	Paving	3000	400
PA00193	500mm PaveSlot - 3m	Up to C250	Paving	3000	500
PA00194	600mm PaveSlot - 3m	Up to C250	Paving	3000	600

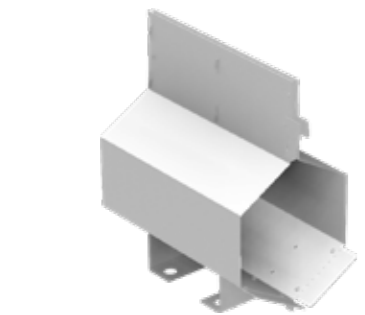
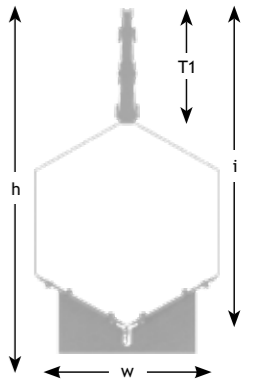
Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)
357	308	200	16	10	10261	30.3
415	366	200	16	10	10261	36.5
501	452	200	16	10	10261	46.7
587	538	200	16	10	10261	55.9
645	596	200	16	10	10261	62.1
712	652	200	16	10	10261	111.9
828	768	200	16	10	10261	132.5
1091	1031	200	16	10	10261	202.8



PaveSlot 1m Channels

Code	Description	Load Rating	Surface Finish	Length (mm)	Width (w) (mm)
PA00033	100mm PaveSlot - 1m	Up to C250	Paving	1000	100
PA00034	150mm PaveSlot - 1m	Up to C250	Paving	1000	150
PA00035	225mm PaveSlot - 1m	Up to C250	Paving	1000	225
PA00036	300mm PaveSlot - 1m	Up to C250	Paving	1000	300
PA00037	350mm PaveSlot - 1m	Up to C250	Paving	1000	350
PA00195	400mm PaveSlot - 1m	Up to C250	Paving	1000	400
PA00196	500mm PaveSlot - 1m	Up to C250	Paving	1000	500
PA00197	600mm PaveSlot - 1m	Up to C250	Paving	1000	600

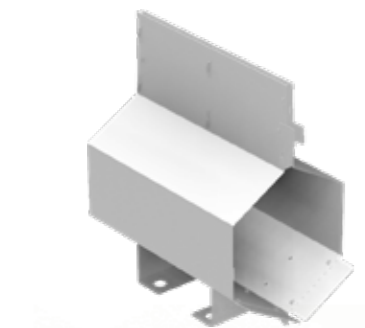
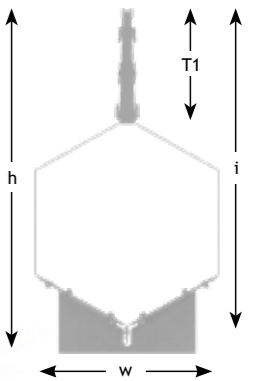
Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)
357	308	200	16	10	10261	10.7
415	366	200	16	10	10261	12.8
501	452	200	16	10	10261	16.9
587	538	200	16	10	10261	20
645	596	200	16	10	10261	22.2
712	652	200	16	10	10261	40.8
828	768	200	16	10	10261	47.8
1091	1031	200	16	10	10261	71.3



PaveSlot 500mm Channels

Code	Description	Load Rating	Surface Finish	Length (mm)	Width (w) (mm)
PA00041	100mm PaveSlot - 500mm	Up to C250	Paving	500	100
PA00042	150mm PaveSlot - 500mm	Up to C250	Paving	500	150
PA00043	225mm PaveSlot - 500mm	Up to C250	Paving	500	225
PA00044	300mm PaveSlot - 500mm	Up to C250	Paving	500	300
PA00045	350mm PaveSlot - 500mm	Up to C250	Paving	500	350
PA00198	400mm PaveSlot - 500mm	Up to C250	Paving	500	400
PA00199	500mm PaveSlot - 500mm	Up to C250	Paving	500	500
PA00200	600mm PaveSlot - 500mm	Up to C250	Paving	500	600

Height (h) (mm)	Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/ Metre (mm ²)	Weight (kg)
357	308	200	16	10	10261	5.7
415	366	200	16	10	10261	6.8
501	452	200	16	10	10261	9.4
587	538	200	16	10	10261	11
645	596	200	16	10	10261	12.1
712	652	200	16	10	10261	22.9
828	768	200	16	10	10261	26.5
1091	1031	200	16	10	10261	38.3



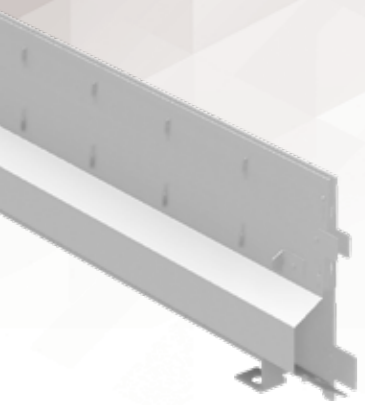
PaveSlot Drop Connectors

Code	Description
00155	100-150mm Drop Connector
00156	150-225mm Drop Connector
00157	225-300mm Drop Connector
00158	300-350mm Drop Connector
00159	350-400mm Drop Connector
00160	400-500mm Drop Connector
00161	500-600mm Drop Connector

From Channel Width (mm)	To Channel Width (mm)	Weight (kg)
100	150	0.4
150	225	0.7
225	300	1
300	350	0.9
350	400	1.7
400	500	2.7
500	600	5.9



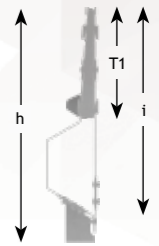
Slotdrain product selector - Gatic FacadeSlot



FacadeSlot 3m Channels

Code	Description	Load Rating	Surface Finish	Length (mm)	Width (w) (mm)	Height (h) (mm)
FA00025	50mm FacadeSlot - 3m	A15	Paving	3000	50	357
FA00026	75mm FacadeSlot - 3m	A15	Paving	3000	75	415
FA00027	115mm FacadeSlot - 3m	A15	Paving	3000	115	501

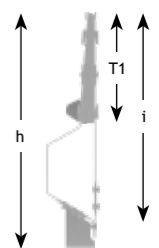
Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/Metre (mm ²)	Weight (kg)
308	200	16	10	10470	28.2
366	200	16	10	10470	33.4
452	200	16	10	10470	41.5



FacadeSlot 1m Channels

Code	Description	Load Rating	Surface Finish	Length (mm)	Width (w) (mm)	Height (h) (mm)
FA00033	50mm FacadeSlot - 1m	A15	Paving	1000	50	357
FA00034	75mm FacadeSlot - 1m	A15	Paving	1000	75	415
FA00035	115mm FacadeSlot - 1m	A15	Paving	1000	115	501

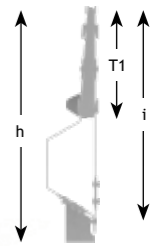
Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/Metre (mm ²)	Weight (kg)
308	200	16	10	10470	9.8
366	200	16	10	10470	11.6
452	200	16	10	10470	14.6



FacadeSlot 500mm Channels

Code	Description	Load Rating	Surface Finish	Length (mm)	Width (w) (mm)	Height (h) (mm)
FA00041	50mm FacadeSlot - 500mm	A15	Paving	500	50	357
FA00042	75mm FacadeSlot - 500mm	A15	Paving	500	75	415
FA00043	115mm FacadeSlot - 500mm	A15	Paving	500	115	501

Invert (i) (mm)	Throat Depth (T1) (mm)	Throat Width (mm)	Slot Orifice (mm)	Intake Area/Metre (mm ²)	Weight (kg)
308	200	16	10	10470	5.1
366	200	16	10	10470	6.1
452	200	16	10	10470	7.8



FacadeSlot System End Caps

Code	Description
00170	FacadeSlot End Cap 50mm
00171	FacadeSlot End Cap 75mm
00172	FacadeSlot End Cap 115mm

To suit channel widths	Weight (kg)
50mm	0.1
75mm	0.2
115mm	0.4



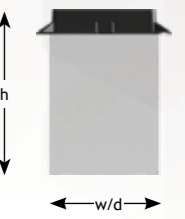
Slotdrain product selector - Boxes



Access Box C/W Treadsafe Double Triangular Grating (CastSlot/UltraSlot)

Code	Description	To Suit Channels	Load Rating	Surface Finish
ADD00116	Access Box c/w Double Triangular Grating	Up to 225	Up to D400	Asphalt / Concrete
ADD00119	Access Box c/w Double Triangular Grating	From 225 to 400	Up to D400	Asphalt / Concrete
ADD00122	Access Box c/w Double Triangular Grating	From 400 to 600	Up to D400	Asphalt / Concrete
ADF00118	Access Box c/w Double Triangular Grating	Up to 225	Up to F900	Concrete
ADF00121	Access Box c/w Double Triangular Grating	From 225 to 400	Up to F900	Concrete
ADF00124	Access Box c/w Double Triangular Grating	From 400 to 600	Up to F900	Concrete

Height (h) (mm)	Width (w) (mm)	Depth (d) (mm)	Intake Area (mm ²)	Pipe Outlet Sizes (mm)	Box Weight (kg)	Cover/Grate Weight (kg)	Total Weight (kg)
475	308	308	9008	N/A	6.7	38.4	45.1
675	485	485	33486	N/A	26.7	67.6	94.3
1055	686	686	82845	N/A	73.1	122.9	196.1
475	308	308	9008	N/A	6.7	40.1	46.8
675	485	485	33486	N/A	26.7	76.7	103.4
1055	686	686	82845	N/A	73.1	146.2	219.3

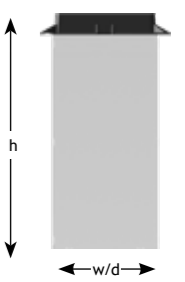


Outlet Box C/W Treadsafe Double Triangular Grating (CastSlot/UltraSlot)



Code	Description	To Suit Channels	Load Rating	Surface Finish
TDD00116	Outlet Box c/w Double Triangular Grating	Up to 225	Up to D400	Asphalt / Concrete
TDD00119	Outlet Box c/w Double Triangular Grating	From 225 to 400	Up to D400	Asphalt / Concrete
TDD00122	Outlet Box c/w Double Triangular Grating	From 400 to 600	Up to D400	Asphalt / Concrete
TDF00118	Outlet Box c/w Double Triangular Grating	Up to 225	Up to F900	Concrete
TDF00121	Outlet Box c/w Double Triangular Grating	From 225 to 400	Up to F900	Concrete
TDF00124	Outlet Box c/w Double Triangular Grating	From 400 to 600	Up to F900	Concrete

Height (h) (mm)	Width (w) (mm)	Depth (d) (mm)	Intake Area (mm ²)	Pipe Outlet Sizes (mm)	Box Weight (kg)	Cover/Grate Weight (kg)	Total Weight (kg)
740	308	308	9008	115/ 165/ 205/ 255	10.6	38.4	49.1
1125	485	485	33486	205/ 255/ 320/ 360/ 440	44	67.6	111.6
1495	686	686	82845	320/ 360/ 440	101.7	122.9	224.7
740	308	308	9008	115/ 165/ 205/ 255	10.6	40.1	50.7
1125	485	485	33486	205/ 255/ 320/ 360/ 440	44	76.7	120.7
1495	686	686	82845	320/ 360/ 440	101.7	146.2	247.9

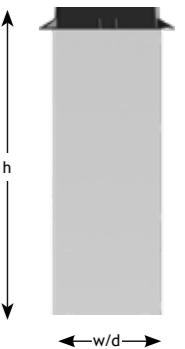


Silt Box C/W Treadsafe Double Triangular Grating (CastSlot/UltraSlot)



Code	Description	To Suit Channels	Load Rating	Surface Finish
SDD00116	Silt Box c/w Double Triangular Grating	Up to 225	Up to D400	Asphalt / Concrete
SDD00119	Silt Box c/w Double Triangular Grating	From 225 to 400	Up to D400	Asphalt / Concrete
SDD00122	Silt Box c/w Double Triangular Grating	From 400 to 600	Up to D400	Asphalt / Concrete
SDF00118	Silt Box c/w Double Triangular Grating	Up to 225	Up to F900	Concrete
SDF00121	Silt Box c/w Double Triangular Grating	From 225 to 400	Up to F900	Concrete
SDF00124	Silt Box c/w Double Triangular Grating	From 400 to 600	Up to F900	Concrete

Height (h) (mm)	Width (w) (mm)	Depth (d) (mm)	Intake Area (mm ²)	Pipe Outlet Sizes (mm)	Box Weight (kg)	Cover/Grate Weight (kg)	Total Weight (kg)
930	308	308	9008	115/ 165/ 205/ 255	14.1	38.4	55.3
1415	485	485	33486	205/ 255/ 320/ 360/ 440	57.1	67.6	136.5
1935	686	686	82845	320/ 360/ 440	133.8	122.9	287.8
930	308	308	9008	115/ 165/ 205/ 255	14.1	40.1	55.3
1415	485	485	33486	205/ 255/ 320/ 360/ 440	57.1	76.7	145.6
1935	686	686	82845	320/ 360/ 440	133.8	146.2	311

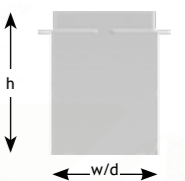


Access Box C/W Galvanised Recessed Cover (PaveSlot)



Code	Description	To Suit Channels	Load Rating	Surface Finish
AFC00125	Access Box c/w Galvanised Recessed Cover	Up to 225	Up to C250	Paving
AFC00127	Access Box c/w Galvanised Recessed Cover	From 225 to 400	Up to C250	Paving
AFC00129	Access Box c/w Galvanised Recessed Cover	From 400 to 600	Up to C250	Paving

Height (h) (mm)	Width (w) (mm)	Depth (d) (mm)	Intake Area (mm ²)	Pipe Outlet Sizes (mm)	Box Weight (kg)	Cover/Grate Weight (kg)	Total Weight (kg)
475	308	308	2710	N/A	6.7	28.7	35.4
675	485	485	4460	N/A	26.7	50.5	77.2
1055	686	686	6460	N/A	73.1	78	151.1



Outlet Box C/W Galvanised Recessed Cover (PaveSlot)



Code	Description	To Suit Channels	Load Rating	Surface Finish
TFC00125	Outlet Box c/w Galvanised Recessed Cover	Up to 225	Up to C250	Paving
TFC00127	Outlet Box c/w Galvanised Recessed Cover	From 225 to 400	Up to C250	Paving
TFC00129	Outlet Box c/w Galvanised Recessed Cover	From 400 to 600	Up to C250	Paving

Height (h) (mm)	Width (w) (mm)	Depth (d) (mm)	Intake Area (mm ²)	Pipe Outlet Sizes (mm)	Box Weight (kg)	Cover/Grate Weight (kg)	Total Weight (kg)
740	308	308	2710	115/ 165/ 205/ 255	10.6	28.7	39.3
1125	485	485	4460	205/ 255/ 320/ 360/ 440	44	50.5	94.5
1495	686	686	6460	320/ 360/ 440	101.7	78	179.7

