

Surface Water Drainage

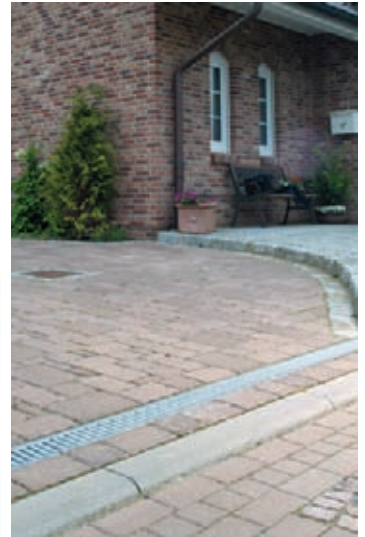
Keyline supplies everything from domestic standard units to the higher specification ranges. Keyline is uniquely positioned to provide a complete solution to all your surface water drainage requirements.



ACO RainDrain Plus™

ACO RainDrain Plus™ is a versatile domestic polymer concrete channel system, particularly suitable for block paving applications.

- Traditional channel and grate appearance
- Lightweight, quick and easy to install
- Clip locking gratings
- Choice of galvanised steel grating for pedestrian areas and domestic drives, and cast iron gratings for light vehicle traffic
- Extended range of suitable applications
- Fully certified and CE marked to BS EN 1433:2002 Load Class A15 & B125
- B125 Load Class only with cast iron grating



ACO N100K

ACO's most popular general purpose drainage system is available in a variety of depths and gratings. The galvanised steel top rail simplifies installations in concrete and asphalt and provides protection to the grating and seat.

- Traditional channel and grate solution
- Pre-sloped and level invert units available
- Range of accessories for quick and simple connections to underground drainage
- ACO Quicklock® gratings speed and simplify installation and maintenance
- Choice of galvanised or stainless steel edge rails
- Wide range of galvanised, stainless steel and cast iron gratings
- The system is fully certified to BS EN 1433:2002 Load Class C250

N100K Hydraulics Summary

Channel Type	Overall Channel Height mm	Max Area/m ²		
		Run of 20m	Run of 30m	Run of 50m
0.0	150	340	330	300
5.0	175	470	440	390
10.0	200	580	540	500
20.0	250	860	810	700
30.0	300	1180	1110	950



ACO S Range

ACO S Range is a heavy duty channel and grating drainage system with cast-in ductile iron edge rail for use in industrial yards, docksides and airports.

- Traditional channel and grate solution for heavy duty applications
- Ranges of sizes and depths available
- Selection of accessories for connection to underground drainage
- The system is fully certified to BS EN 1433:2002 Load Class F900



ACO S Range Hydraulics Summary

Product Name	Channel Type	Overall Channel Height mm	Max Area/m ²		
			Run of 20m	Run of 30m	Run of 50m
S100	S01	137	270	250	-
	S05	161	375	350	313
	S010	191	525	490	440
	S020	251	870	815	735
	S030	311	1265*	1185	1075
S150	1501	220	1010*	970*	895*
	1502	270	1480*	1415*	1305*
	1503	320	2015*	1900*	1770*
S200	2300	309	2465*	2375*	2230*
S300	2400	390	-	5725†	5455†

* Flows will require a 160mm outlet or universal gully

† Flows will require at least a 200mm outlet, and possibly two gully units

ACO Brickslot

Discreet slot drainage system ideal for visually sensitive paved areas.

- Slotted system can minimise the risk of blockage
- 10mm wide inlet slots provide heel protection
- Available in a variety of lengths and depths
- Two slot finishes available; Galvanised or Stainless Steel
- The system is fully certified to BS EN 1433:2002 for Load Class C250 applications



ACO ParkDrain®

ACO ParkDrain® is a tough one-piece channel drainage system for light to medium duty car park use.

- One-piece design means no risk of grating loss
- Level or stepped invert system for efficient scheme design
- Heelguard slots for safe pedestrian traffic
- Lightweight design for quick installation
- Manufactured from lightweight polymer concrete
- Compatible with most paved surfaces
- The system is fully certified to BS EN 1433:2002 Load Class C250



ACO RoadDrain®

ACO RoadDrain® is a tough one-piece channel drainage system ideal for medium and heavy duty road and warehouse applications.

- No loose gratings, safety benefit for road users
- Level or stepped invert system for efficient scheme design
- 500mm units for easy and quick installation
- Range of accessories available for simple connection to underground drainage



- Complies fully with the Specification for Highway Works, Clause 517
- Large intakes for maximum hydraulic performance
- Certified to BS EN 1433:2002, Load Class F900

ACO RoadDrain® Hydraulics Summary

Product Name	Channel Type	Overall Channel Height mm	Max Area/m ²		
			Run of 20m	Run of 50m	Run of 100m
RoadDrain 100	10.1	250	370	305	-
	20.1	300	620	525	-
	30.1	350	915	775	-
	40.1	400	1250*	1065	880
	50.1	450	1630*	1380*	1150
RoadDrain 200	10.1	400	1765†	1585†	1390†
	20.1	450	2460†	2215†	1950†
	30.1	500	3230†	2915†	2580†

* Flows will require a 160mm outlet or universal gully

† Flows will require at least a 200mm outlet, and possibly two gully units

ACO KerbDrain®

An award-winning one-piece combined kerb and drainage system. ACO KerbDrain® is ideal for highway, car parking and Sustainable Drainage System applications.

- One-piece unit, no loose components
- System suitable for a wide variety of highway and car parking applications
- Same size as traditional HB1, HB2 and splay kerb units
- Resin concrete construction, lightweight and strong
- Complies fully with the Specification for Highway Works, Clause 516
- Full range of accessories available for applications including traffic calming, raised carriageways, pick up points and bus stops
- Certified to BS EN 1433:2002 Load Class D400



ACO Lightweight Kerb™

ACO Lightweight Kerb™ combines the benefits of a traditional standard kerb with a very lightweight design.

- Lightweight design can increase installation rates
- Unit can be safely manually handled
- Improves on-site efficiency, removes the need for mechanical assistance
- Easy integration with existing HB2 units
- Easy to cut
- HB2 kerb is very lightweight, helping you comply with HSE guidelines on manual handling of kerbstones simply and easily. Units are 914mm long for easy repair work, and weigh just 16kg



ACO Profile™

ACO Profile™ is a one-piece pre-galvanised steel slot drainage system.

- One-piece design prevents leakage
- Available in 2m lengths for easy installation
- 2 slot designs available depending on application requirements
- System can cater for any load class up to and including F900
- In order to meet the requirements of BS EN 1433:2002 the channel joints may need to be sealed. Sealing detail is available on request



ACO Qmax®

ACO Qmax® is an award-winning, continuous slot drainage system for high capacity drainage and attenuation. The system is currently available from 225mm to 900mm for varying catchment areas and lengths to outfall. Ask at your local branch for details.

- Simple and fast installation
- Can provide long runs to outfalls
- Removes need for additional carrier pipes
- Quick and versatile connectivity
- Reinforced concrete pavement continuous over the channel
- Can cater for all types of surface finish
- Can cater for all load classes with minimal reinforcement
- Arch design in the 'throat' permits service cables to pass through the drainage run
- In 2006, ACO Qmax won The Queen's Award for Enterprise: Innovation



ACO GroundGuard

The award-winning lightweight ground reinforcement system. Ideal for stabilising grass or gravel, it helps eliminate the risks of pot holes, rutting or grass damage. The system is suitable for a wide variety of applications including paths, drives, parking areas and emergency access routes.

Key Benefits

Ideal for a wide variety of applications – vehicle and pedestrian traffic, fire access lanes and parking areas.

- Lightweight – just 1kg per piece
- Easy to handle and install; simple clip-together fixings
- Easily cut to shape for irregular edging
- Cost effective solution – competitive with asphalt or block paving
- Suitable for gradients up to 5% or steeper when pegged
- Eliminates gravel migration and raking



OSMA: Domestic Channel Drainage

The Osma range of domestic channel drainage products offers a complete and integrated surface water drainage system for all domestic applications.

The range consists of:



- OsmaChannel – Domestic polymer concrete drainage system



- RainChannel – Domestic plastic channel drainage system



- ThresholdChannel

Osma Channel Drainage

Supplier Code	Depth mm	Width mm	Description	Keyline Code
1000C210	80	120	OsmaChannel - 1m	947919
1000C211	33	120	OsmaChannel Grating - 1m (spare)	947922
1000C230	450	120	OsmaChannel Sump Unit	994201
1000C260	81	123	OsmaChannel End Plate	947920
1000C410	120	87	RainChannel - 1m	201409
1000C460	120	87	RainChannel End Plate	201410
1000C510	128	40	Threshold Channel - 1.2m (plastic)	428670
1000C520	48	40	Threshold Outlet Adaptor	428672
1000C530	42	50	Threshold Jointing Piece	428673
1000C560	128	40	Threshold End Plate (x2)	428671
1000C805	-	-	OsmaChannel Grating Lock (spare)	-
1000C900	-	-	OsmaChannel Sump Bucket (spare)	-

PolyChannel: channel drainage system

The PolyChannel range of polymer concrete channel drainage products from Wavin Plastics Ltd offers a complete and integrated surface water drainage system for all applications. PolyChannel is suitable for any application where surface water requires transportation for disposal or recycling, from supermarkets to sports stadia, bridges to bus depots, footways, airports, hospitals and car parks as well as domestic driveways and cycle paths.

Available in widths of 100, 150, 200 and 300mm, in a range of flats and slopes for medium and heavy duty applications with a wide range of gratings and a full range of accessories, PolyChannel will satisfy the requirements of any channel drainage application.

All PolyChannel products are manufactured from Polydyn® polyester concrete, which offers excellent chemical resistance, ageing resistance and water absorption of less than 0.5%. It is strong, lightweight and easy to machine, cut and drill on site.

Loading Summary

System	100	150	200	300
SK	B,C,E	C,E	C,E	E
SKCR	C,E	-	-	-
SK Piccolo	B,C,E	-	-	-
SKCR Piccolo	C,E	-	-	-
SKS	F	F	F	F
SKS Piccolo	F	-	-	-
SPQ	F	-	F	-

Class/Loading

B = 125kN, C = 250kN, E = 600kN, F = 900kN

Flat channels



Sloped channels

(i.e. with 0.6% built in fall)



Stepped channels



Notes: Flat channels are available in all lines.

Sloped channels are also available in SK NW100, SKCR NW100, SKS NW100.

PolyChannel SK

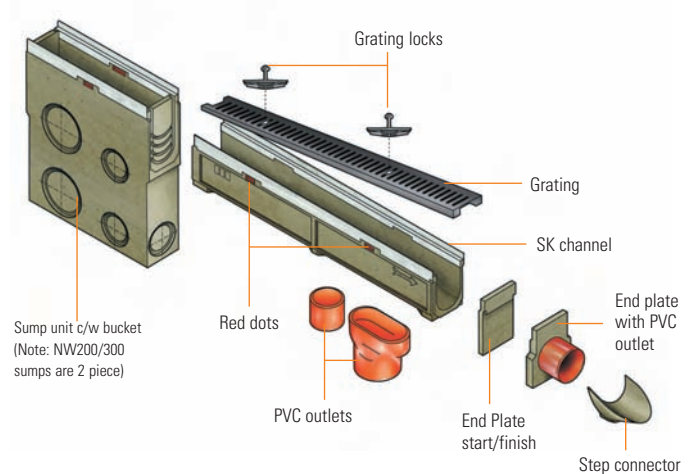
The Wavin PolyChannel SK range provides a good general purpose solution for all drainage situations in the class A15 - E600 range.

The channel incorporates full length anchoring ribs and the Red Dot vibration damping securing system to enable secure anchorage of the grating against vehicular override.



For enhanced strength the PolyChannel SK system is supplied with galvanised steel edges bonded into the channel along their full length, and includes a wide range of grating options for all aesthetic and performance requirements.

Gratings are manufactured from galvanised steel, ductile iron, composite plastic and stainless steel to accommodate applications such as footpaths, car parks, playgrounds, shower areas, swimming pools and garage driveways.

The NW100 SK channel is available with stainless steel edges (SKCR) for use with stainless gratings and as a shallow unit (SK Piccolo) for restricted depth construction, such as multi-storey car parks or flat roof constructions.





PolyChannel SK NW100 gratings

	Supplier	Grating Locks		Loading Class	Weight kg	Nominal Length m
	Code	Standard	Piccolo			
Slotted Galvanised Steel 	100SK420	100SK810	100SKP810	B	2.72	1.0
	100SK422	100SK810	100SKP810	B	1.36	0.5
Slotted Galvanised Steel Reinforced 	100SK424	100SK810	100SKP810	C	4.91	1.0
	100SK426	100SK810	100SKP810	C	2.39	0.5
Slotted Stainless Steel Reinforced 	100SK425	100SK807	100SKP807	C	5.16	1.0
	100SK427	100SK807	100SKP807	C	2.39	0.5



**Note: The PolyHeel grating is designed for pedestrian and shopping area drainage applications, where the use of high heels and small wheeled traffic (e.g. shopping trolleys) need to be accommodated. The size and configuration of the PolyHeel grating prevents narrow heels or small wheels being caught within the slots.

	Supplier	Grating Locks		Loading Class	Weight kg	Nominal Length m	
	Code	Standard	Piccolo				
PolySpectra Composite Grating 	100SK581 (black)	100SK805	100SKP805	C	1.35	0.5	
	100SK584 (white)	100SK805	100SKP805	C	1.35	0.5	
	100SK585 (beige)	100SK805	100SKP805	C	1.35	0.5	
	100SK586 (grey)	100SK805	100SKP805	C	1.35	0.5	
	Slotted Cast Iron 	100SK502	100SK805	100SKP805	C	4.88	0.5
	Slotted Cast Iron PolyHeel** 	100SK508	100SK805	100SKP805	C	5.16	0.5

PolyChannel SK NW100 gratings cont.



	Supplier Code	Grating Locks		Loading Class	Weight kg	Nominal Length m
		Standard	Piccolo			
Slotted Stainless Steel Reinforced 	100SK429	100SK807	100SKP807	E	7.45	1.0
	100SK431	100SK807	100SKP807	E	3.67	0.5
Slotted Ductile Iron 	100SK504	100SK805	100SKP805	E	4.57	0.5
Z Tread Chequer Plate 	100SK506	100SK810	100SKP810	E	5.60	0.5

PolyChannel SK NW150 gratings

	Supplier Code	Locks Standard	Loading Class	Weight kg	Nominal Length m
Slotted Cast Iron PolyHeel** 	150SK508	150SB805	C	8.20	0.5
Slotted Ductile Iron 	150SK504	150SB805	E	9.00	0.5

**Note: The PolyHeel grating is designed for pedestrian and shopping area drainage applications, where the use of high heels and small wheeled traffic (e.g. shopping trolleys) needs to be accommodated. The size and configuration of the PolyHeel grating prevents narrow heels or small wheels being caught within the slots.

PolyChannel SK NW200 gratings

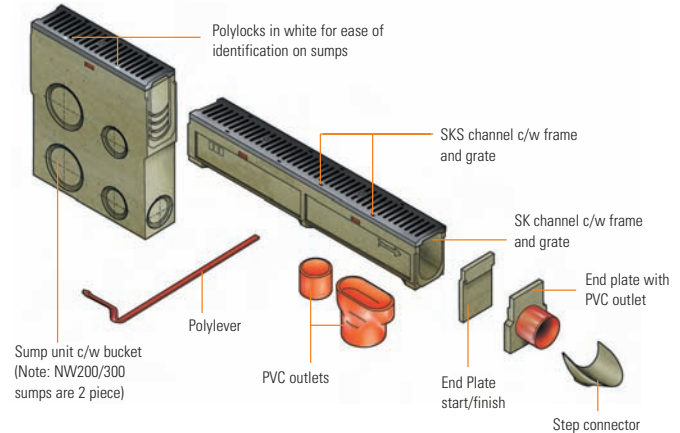
	Supplier Code	Locks Standard	Loading Class kg	Weight Length m	Nominal
Slotted Cast Iron PolyHeel** 	200SK502	200SB805	C	10.20	0.5
Slotted Ductile Iron 	200SK504	200SB805	E	12.54	0.5

**Note: The PolyHeel grating is designed for pedestrian and shopping area drainage applications, where the use of high heels and small wheeled traffic (e.g. shopping trolleys) need to be accommodated. The size and configuration of the PolyHeel grating prevents narrow heels or small wheels being caught within the slots.



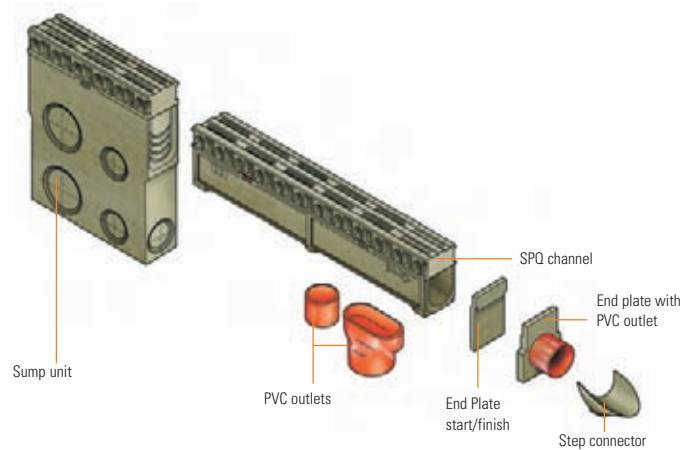
PolyChannel SKS

The Wavin PolyChannel SKS range is a heavy duty channel system for applications up to F900 loading classifications. Supplied as a one piece monolithic unit the enormous strength of the bond between frame and channel and the armour coated Class F ductile grating, secured by the unique PolyLock® boltless locking device, guarantees system performance for applications such as airport and runway use, and heavy duty industrial applications. The NW100 SKS system is also available in a shallow Piccolo unit for restricted depth applications.



PolyChannel SPQ

The Wavin PolyChannel SPQ range has been specifically designed for applications where exceptional dynamic traffic loadings of a compressive or vibrative nature occur. Available in NW100 and NW200 the one-piece monolithic polymer concrete construction provides exceptional strength, which is ideal for applications such as motorway crossovers.



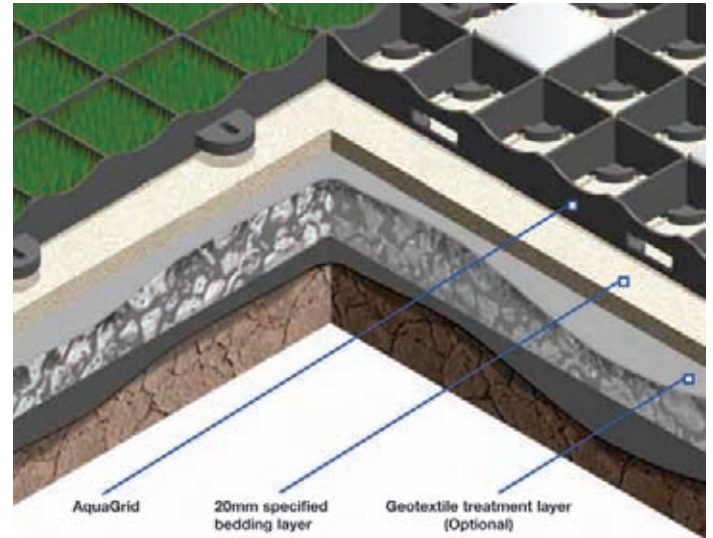
Wavin AquaGrid

AquaGrid is a high performance plastic pervious paving system for use in all types of Sustainable Drainage Systems (SUDS).

Key Benefits

The AquaGrid system provides benefits over traditional forms of grass protection and gravel retention systems such as:

- Interlocking and pinning arrangement
- Inter-connecting modular units
- Lateral flow capability
- 90% surface area available for infill
- Demarcation Blocks available for identification of car park areas



Delivering Outstanding Service

Keyline is known for its civils and drainage expertise, offering you a total solution to all your requirements. With branches across the country, Keyline will provide the specialist civils products you need directly from stock.

- Branches nationwide
- A huge range and depth of materials always in stock
- Our staff are helpful, friendly and knowledgeable
- We provide a speedy, efficient and accurate service
- We get it right first time

