

ACO Water Management:

Civils + Infrastructure

Uniclass L7315 + L2123	EPIC J3413
CI/SfB (52.5)	

ACO S Range



ACO S Range

Heavy-duty channel drainage system



Introduction to ACO S Range

ACO S Range is an accessible grated channel drainage system, specifically designed for surface water management in heavy-duty and industrial applications such as petrol station forecourts, HGV parking and warehousing.

What is ACO S Range?

ACO S Range delivers high performance drainage for heavy-duty and industrial applications and is fully certified to BS EN 1433:2002 load class F 900*.

Manufactured from Vienite®, ACO's sustainable high strength polymer concrete material the S Range channels are available in four widths, 100mm, 150mm, 200mm and 300mm in a variety of depths and slopes.

Where a higher capacity drainage system is required the S150, S200 or S300 constant depth units are ideal for dealing with larger volumes of water. This keeps the water closer to the surface and reduces the need for costly underground pipe networks.

Depending on the application and anticipated traffic the S100 range is available with a choice of ductile iron grating and cover designs including Slotted, Heelguard™, Intercept and Solid.

The S150, S200 and S300 ranges are supplied assembled with slotted ductile iron gratings. All gratings are fastened with a secure bolt locking system.



Typical applications

- ▶ Car parking
- ▶ HGV parking
- ▶ Petrol station forecourts
- ▶ Industrial
- ▶ Distribution and warehouses
- ▶ Ports and docks
- ▶ Aircraft pavements



If you need help with specification, design or installation, or just wish to learn more about this and other Surface Water Management products from ACO, contact our free, no obligation ACO Water Management Design Services Team who can provide advice and dedicated design support for your project – 01462 816666 or visit www.aco.co.uk.



Why Choose ACO S Range?

Heavy-duty

S Range is specifically designed for heavy-duty and industrial applications fully certified to BS EN 1433:2002 for applications up to and including F 900*.

The polymer concrete's high strength characteristics means the material is four times stronger than traditional concrete.

All S Range channels are supplied with integral cast iron rails for channel body protection. The rails not only provide strength and wear resistance to the channels for long service life, but also ensure each heavy-duty grating can be fully secured from movement by our proven and reliable four point, M10 high tensile bolt locking system.

Durability & water tightness

Manufactured from Vienite® the S Range channel bodies have many benefits including excellent resistance to dilute acids and alkalis, is unaffected by road salts, fuels and oils typically encountered during service.

Having a water absorption level of only 0.01% by weight, Vienite® ensures water tight installations can be achieved to prevent unwanted contamination of surrounding soil or ground water in applications such as petrol stations.

Accessibility

The S Range has a full range of sumps and gullies to provide a complete solution for efficient drainage and long term silt management with maintenance by standard jet washing techniques.

Each heavy-duty grating is accessible by our proven and reliable four point, M10 high tensile bolt locking system.



System benefits:

- ▶ Range of constant and sloped depth channels
- ▶ Caters for extreme wheel loads such as aircraft pavements, ports and docks
- ▶ Strong and robust design
- ▶ CE Marked and BS EN 1433:2002 certified to Load Class F 900*
- ▶ Caters for a range of catchment depths
- ▶ Choice of slotted, Heelguard™, intercept and solid cover gratings on the 100mm wide system
- ▶ All gratings come complete with locking bolts
- ▶ Sump and gully outlets available for connection to underground drainage



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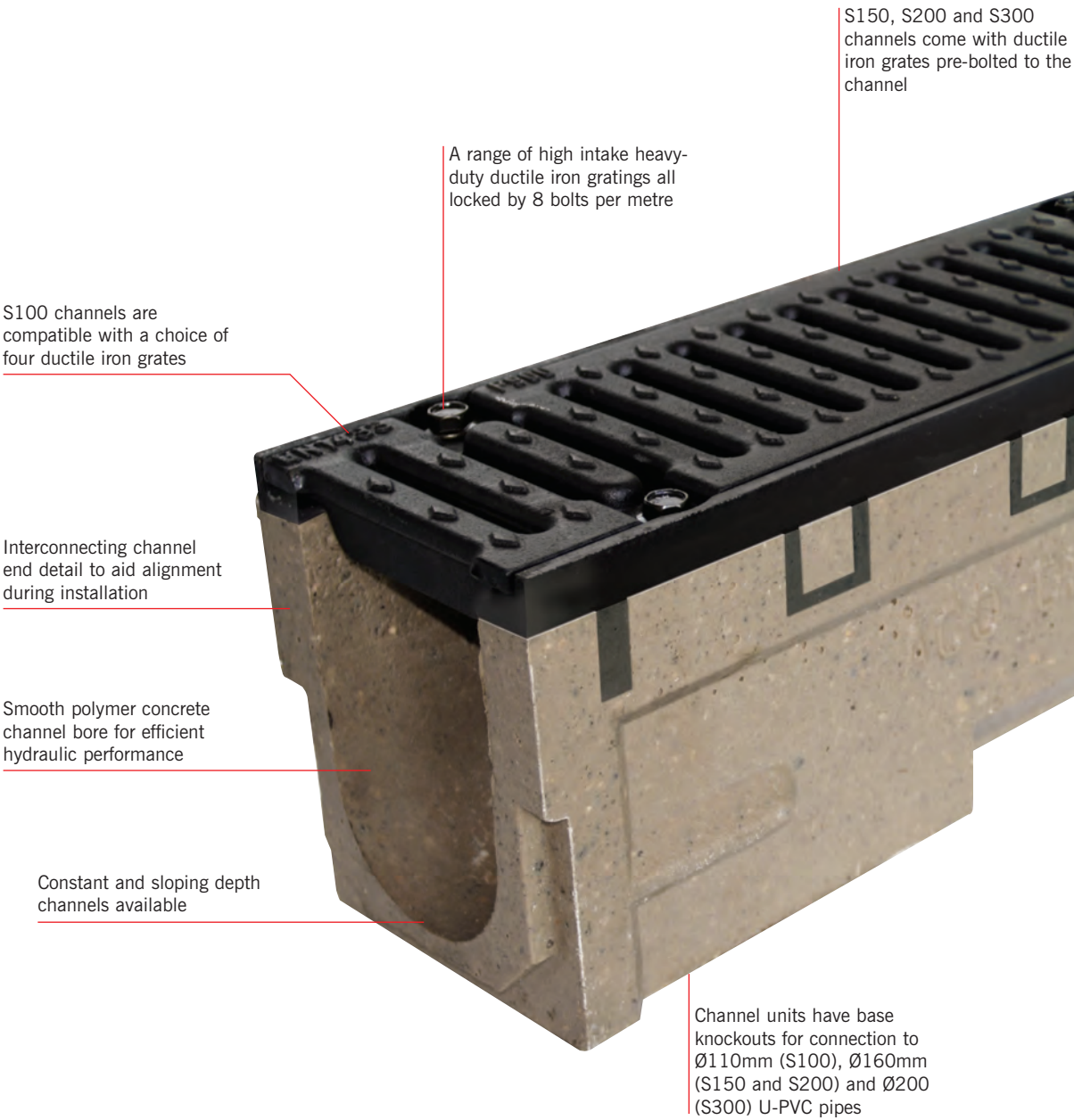


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ACO S RANGE FEATURES OVERVIEW



LOAD CLASSES



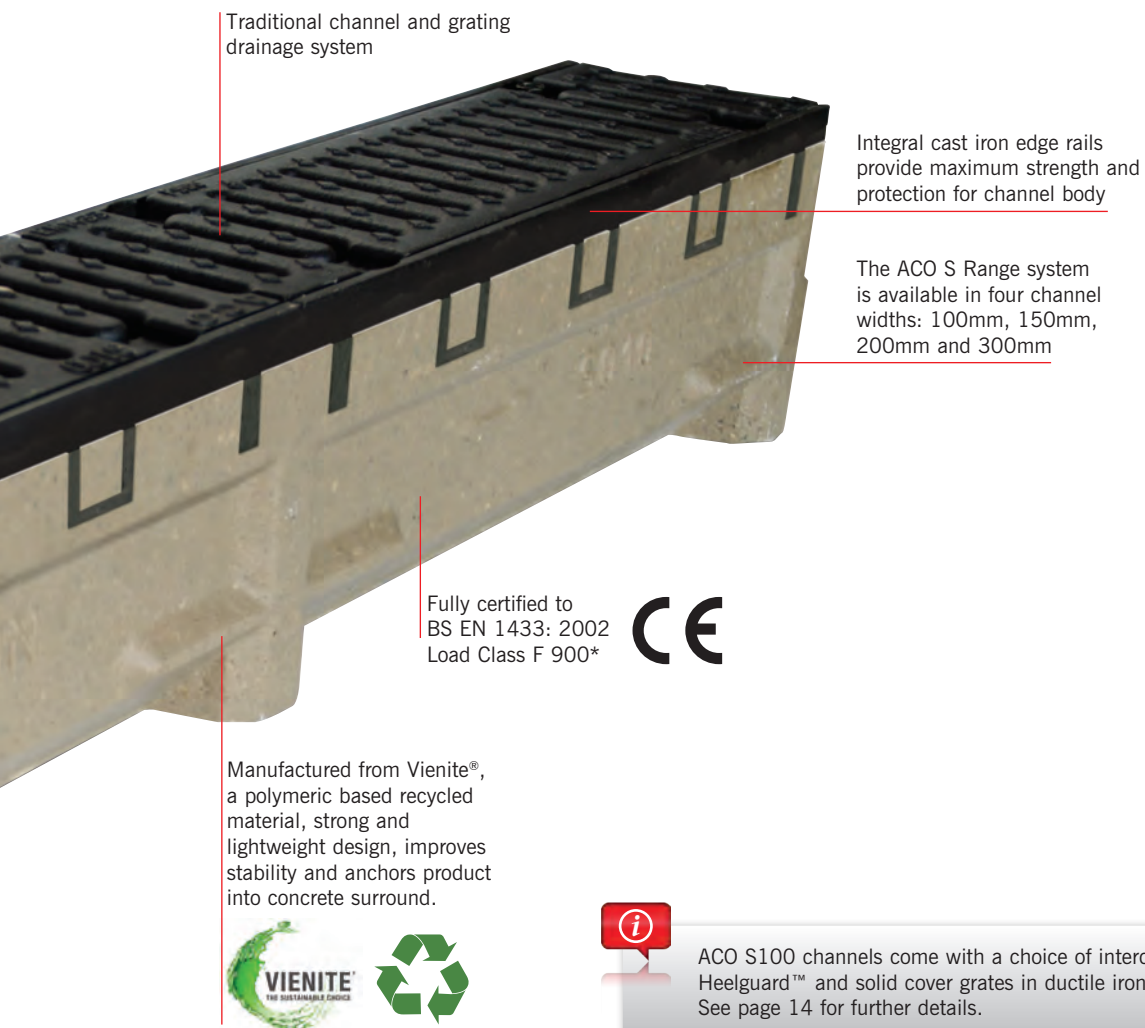
A 15
Pedestrian, cycleways, minimally trafficked area (light domestic vehicles only).



B 125
Pedestrian precincts, light vehicles, private car parks and drives.



C 250
Parking areas, service stations (cars) and slow-moving light commercial vehicles.



Traditional channel and grating drainage system

Integral cast iron edge rails provide maximum strength and protection for channel body

The ACO S Range system is available in four channel widths: 100mm, 150mm, 200mm and 300mm

Fully certified to
BS EN 1433: 2002
Load Class F 900*



Manufactured from Vienite®, a polymeric based recycled material, strong and lightweight design, improves stability and anchors product into concrete surround.



ACO S100 channels come with a choice of intercept, slotted, Heelguard™ and solid cover grates in ductile iron. See page 14 for further details.



D 400*

Parking areas for all vehicle types, distribution yards.



E 600*

Industrial areas, heavy wheel loads, slow-moving HGV's and forklifts, service stations.



F 900*

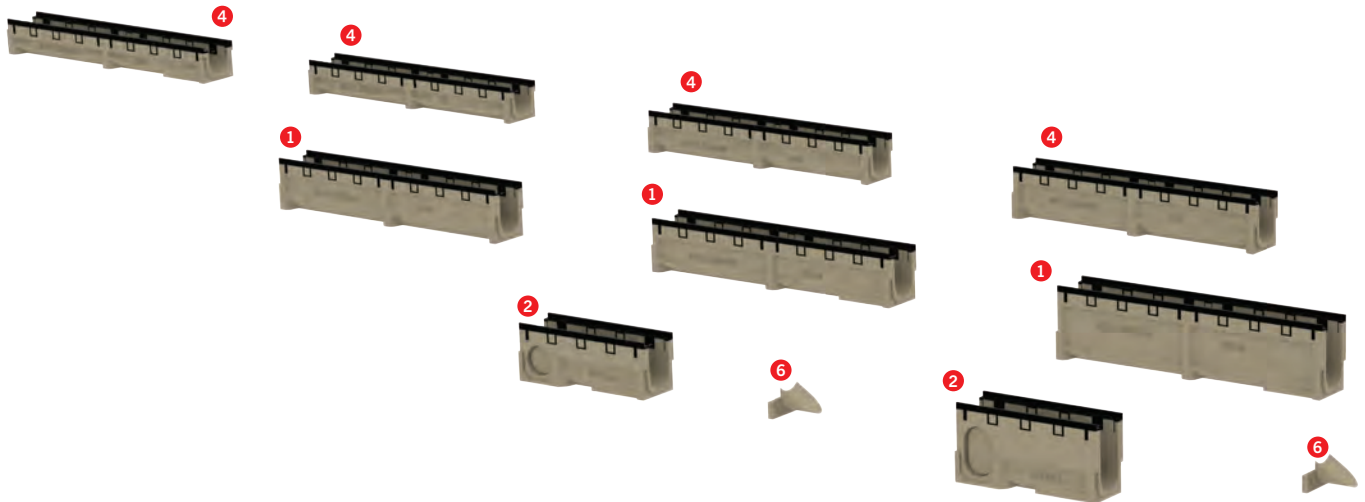
Airport runways, very heavy industrial and military installations, service yards and lorry parks.

ACO S Range Layout

To support a wide variety of catchment depths, hydraulic capacities and applications, the system is available in four channel widths, 100mm, 150mm, 200mm and 300mm and has a range of constant depths and sloping depth channels to suit the drainage design.

The layout below illustrates the channels and accessories available within the ACO S Range and to aid product selection, a summary of the function and feature of each component is provided.

All ACO S Range channels are supplied with ductile iron edge rails.



1 Constant depth channels – 1m



- ▶ **100mm wide bore:** Five constant depth channel units are available in 1m lengths with overall depths ranging from 137mm to 311mm.
- ▶ **150mm wide bore:** Three constant depth channel units are available in 1m lengths with overall depth ranging from 220mm to 320mm.
- ▶ **200mm wide bore:** One constant depth channel unit available in a 1m length with overall depth of 309mm.
- ▶ **300mm wide bore:** One constant depth channel unit available in a 1m length with overall depth of 390mm.

These channels include a vertical knockout for connection to Ø110mm (100mm wide bore channels), Ø160mm (150mm and 200mm wide bore channels) and Ø200mm (300mm wide bore channel) pipework.

2 Constant depth channels – 0.5m



- ▶ **100mm wide bore:** Three 0.5m constant depth channel units are available with overall depths ranging from 191mm to 311mm
- ▶ **150mm wide bore:** Two 0.5m constant depth channels with overall depths ranging from 220mm to 270mm.
- ▶ **200mm wide bore:** One 0.5m constant depth channel with overall depth of 309mm.
- ▶ **300mm wide bore:** One constant depth channel unit available in a 1m length with overall depths of 390mm.

These channels include a vertical knockout for connection to Ø110mm (100mm wide bore channels), Ø160mm (150mm and 200mm wide bore channels) and Ø200mm (300mm wide bore channel) pipework and side knockout for 90° channel connections.

3 Sump



- ▶ **100mm wide bore:** One 0.5m sump for connection to each constant depth 0.5m channel.
- ▶ **150mm wide bore:** One 0.5m sump with a depth of 900mm.
- ▶ **200mm wide bore:** the Universal Gully is used with this range.
- ▶ **300mm wide bore:** One gully top with either shallow or deep base units with an overall depth of 655mm to 910mm

Each system width has one 0.5m universal sump for connection to all channels. Outlet options for Ø110mm and Ø160mm pipes and foul air traps. Plastic silt bucket provided with each unit.

4 Sloping depth channels



- ▶ **100mm wide bore:** Thirty 1m sloping channels with 0.6% fall in depths from 137mm to 317mm.

5 Universal Gully



One universal gully for all applications compatible with S100, S150 and S200 ranges and certified up to Load Class F 900. Standard features include ductile cast iron cover, silt bucket and roddable foul air trap for connection to Ø160mm PVC-U pipe.

6 Step Connector



A polymer concrete unit which helps provide smooth water transition between constant depth channels when used in a stepped system design. The step connector is suitable for the 60mm step between each of the constant channel depths.



7 Inlet Endcap



Three depths of Polymer concrete Inlet Endcaps to be used at specific points in the channel run.

8 Outlet Endcap



Three depths of Polymer concrete Outlet Endcaps to be used at specific points in the channel run.

9 Closing Endcap



Three depths of Polymer concrete Closing Endcaps with integral cast iron edge to be used at specific points in the channel run.

ACO S100

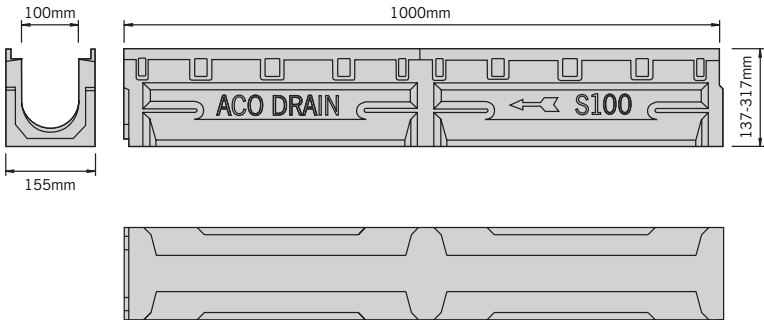
ACO S100 channels listed below are provided with integral cast iron edge rails.

Suitable for applications up to and including BS EN 1433:2002 load class F 900*. For the S100 range of gratings to suit these channels refer to page 14.

The ACO universal gully can be used with all S100 channels see page 18 for further details.

Sloping depth channels with cast iron edge rails

Product code	Description	Length (mm)	Depth overall (mm)	Invert depth (mm)	Weight (kg)	Sump	Gully unit	Closing endcap	Outlet endcap	Inlet endcap
0270	S1	1000	137/143	112/118	20.0	-	601/602/607	S106	-	-
0271	S2	1000	143/149	118/124	20.3	-	601/602/607	S106	-	-
0272	S3	1000	149/155	124/130	20.4	-	601/602/607	S106	-	-
0273	S4	1000	155/161	130/136	20.9	S900	601/602/607	S106	-	-
0275	S5	1000	161/167	136/142	21.0	-	601/602/607	S106	-	-
0276	S6	1000	167/173	142/148	21.1	-	601/602/607	S106	-	-
0277	S7	1000	173/179	148/154	22.9	-	601/602/607	S106	-	-
0278	S8	1000	179/185	154/160	23.3	-	601/602/607	S106	-	-
0279	S9	1000	185/191	160/166	24.1	S900	601/602/607	S106	S108	-
0281	S10	1000	191/197	166/172	24.7	-	601/602/607	S106	-	S109
0282	S11	1000	197/203	172/178	24.8	-	601/602/607	S206	-	-
0283	S12	1000	203/209	178/184	24.9	-	601/602/607	S206	-	-
0284	S13	1000	209/215	184/190	25.0	-	601/602/607	S206	-	-
0285	S14	1000	215/221	190/196	25.7	S900	601/602/607	S206	-	-
0286	S15	1000	221/227	196/202	25.8	-	601/602/607	S206	-	-
0287	S16	1000	227/233	202/208	26.3	-	601/602/607	S206	-	-
0288	S17	1000	233/239	208/214	27.4	-	601/602/607	S206	-	-
0289	S18	1000	239/245	214/220	27.7	-	601/602/607	S206	-	-
0290	S19	1000	245/251	220/226	28.5	S900	601/602/607	S206	S208	-
0292	S20	1000	251/257	226/232	28.8	-	601/602/607	S206	-	S209
0293	S21	1000	257/263	232/238	29.2	-	601/602/607	S306	-	-
0294	S22	1000	263/269	238/244	29.3	-	601/602/607	S306	-	-
0295	S23	1000	269/275	244/250	30.0	-	601/602/607	S306	-	-
0296	S24	1000	275/281	250/256	31.1	S900	601/602/607	S306	-	-
0297	S25	1000	281/287	256/262	31.2	-	601/602/607	S306	-	-
0298	S26	1000	287/293	262/268	31.3	-	601/602/607	S306	-	-
0299	S27	1000	293/299	268/274	32.3	-	601/602/607	S306	-	-
0300	S28	1000	299/305	274/280	32.7	-	601/602/607	S306	-	-
0301	S29	1000	305/311	280/286	33.1	S900	601/602/607	S306	S308	-
0303	S30	1000	311/317	286/292	34.7	-	601/602/607	S306	-	S309



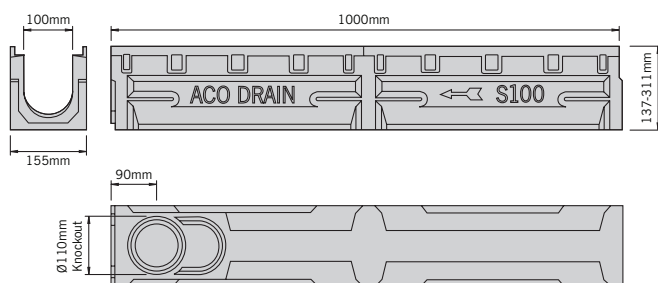
S100 1m sloping depth channel

*Not suitable for carriageways of public roads or motorways

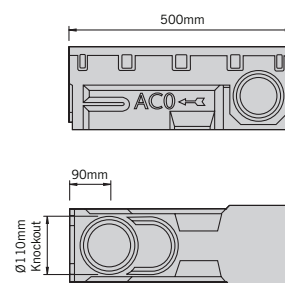
ACO S100

Constant depth channels with cast iron edge rails

Product code	Description	Length (mm)	Width bore (mm)	Width overall (mm)	Depth overall (mm)	Invert depth (mm)	Weight (kg)	Knockout union	Sump	Gully unit	Closing endcap	Outlet endcap	Inlet endcap	Step connector
0269	S01*	1000	100	155	137	112	20.4	820/821	-	601/602/607	S106	-	-	-
0274	S05*	1000	100	155	161	136	21.9	820/821	S900	601/602/607	S106	-	-	-
0403	S010*	1000	100	155	191	166	25.3	820/821	S900	601/602/607	S106	S108	S109	123
0280	S110J*	500	100	155	191	166	13.7	820/821	S900	601/602/607	S106	S108	S109	123
0405	S020*	1000	100	155	251	226	28.9	820/821	S900	601/602/607	S206	S208	S209	123
0291	S120J*	500	100	155	251	226	17.4	820/821	S900	601/602/607	S206	S208	S209	123
0407	S030*	1000	100	155	311	286	33.3	820/821	S900	601/602/607	S306	S308	S309	-
0302	S130J*	500	100	155	311	286	19.7	820/821	S900	601/602/607	S306	S308	S309	-



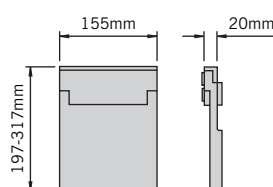
S100 1m constant depth channel



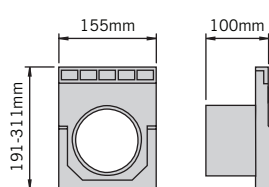
S100 0.5m constant depth channel

Closing outlet and inlet endcaps

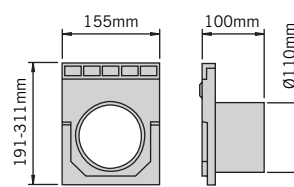
Product code	Description	Length (mm)	Spigot length (mm)	Width overall (mm)	Depth overall (mm)	Invert depth (mm)	Weight (kg)
0411	S106 - Closing	20	-	155	197	-	1.0
0413	S206 - Closing	20	-	155	257	-	1.3
0414	S306 - Closing	20	-	155	317	-	1.7
0415	S108 - Outlet	100	80	155	191	166	1.2
0416	S208 - Outlet	100	80	155	251	226	1.5
0418	S308 - Outlet	100	80	155	311	286	1.9
0419	S109 - Inlet	100	80	155	191	166	1.1
0420	S209 - Inlet	100	80	155	251	226	1.5
0421	S309 - Inlet	100	80	155	311	286	1.9



Closing endcaps



Outlet endcaps



Inlet endcaps

* These level invert channels have a vertical Ø110mm knockout.
J Indicates availability of side junction for 90° bends.

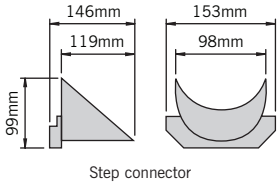
Note: Level invert channels can be inserted to extend a run. Please refer to the channel range layout on page 8. See channel parts table to match endcap with correct channel.

These products are subject to weight and dimensional tolerances. The dimensions shown on this page are for guidance purposes only.

ACO S100

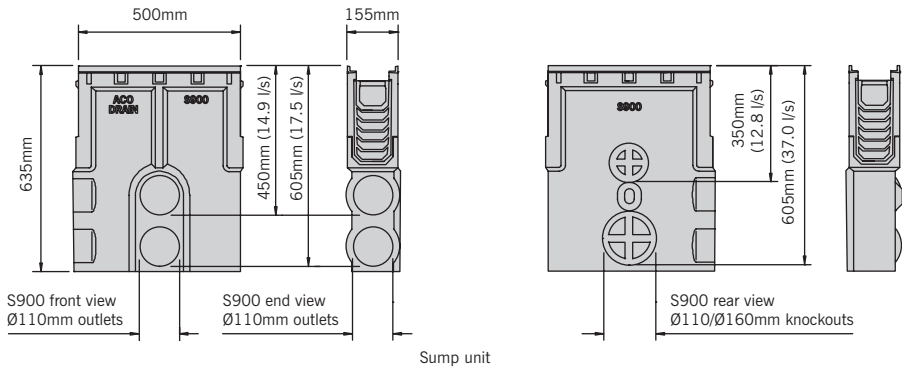
Step connector

Product code	Description	Length (mm)	Width bore (mm)	Width overall (mm)	Depth overall (mm)	Invert depth (mm)	Weight (kg)
0858	60mm step S123	119	98	153	99	60	1.1



Sump unit with cast iron edge rails

Product code	Description	Length (mm)	Width bore (mm)	Width overall (mm)	Depth overall (mm)	Invert depth (mm)	Weight (kg)
4223	Sump unit and polypropylene bucket assembly S900	500	100	155	635	605	38.3



Note: For universal gully details please refer to page 18.

These products are subject to weight and dimensional tolerances. The dimensions shown on this page are for guidance purposes only.

Gratings for use with ACO S100 channels complete with four locking bolts



Gratings for Load Class E 600 applications

Product code	Description	Length (mm)	Width overall (mm)	Depth overall (mm)	Slot width / hole dia (mm)	Intake area mm²/m	Anti-shunt feature	Weight (kg)
0776	Intercept heavy-duty ductile iron ref. 776	500	139	15	10	29000	n/a	6.8



Intercept heavy-duty ductile iron grating



Gratings for Load Class F 900 applications

Product code	Description	Length (mm)	Width overall (mm)	Depth overall (mm)	Slot width / hole dia (mm)	Intake area mm²/m	Anti-shunt feature	Weight (kg)
4604	Slotted heavy-duty ductile iron ref 772	500	139	15	10	32000	n/a	5.6
0774	Heelguard™ heavy-duty ductile iron ref 774	500	139	15	5	16100	n/a	6.7
7626	Solid cover ductile iron ref 778	500	139	15	n/a	n/a	n/a	6.7



Slotted heavy-duty ductile iron grating



Solid cover ductile iron



Heelguard™ heavy-duty ductile iron grating

Note: All ACO S Range gratings come complete with bolts to ensure the system can be locked and accessed when required.

Grating accessories

Product code	Description	Length (mm)	Width overall (mm)	Depth overall (mm)	Slot width / hole dia (mm)	Intake area mm²/m	Anti-shunt feature	Weight (kg)
2324	Spare S100 bolt	30	10	-	-	-	-	0.03
1367	Grating lifting tool 835	n/a	n/a	n/a	n/a	n/a	n/a	0.1



S100 bolt

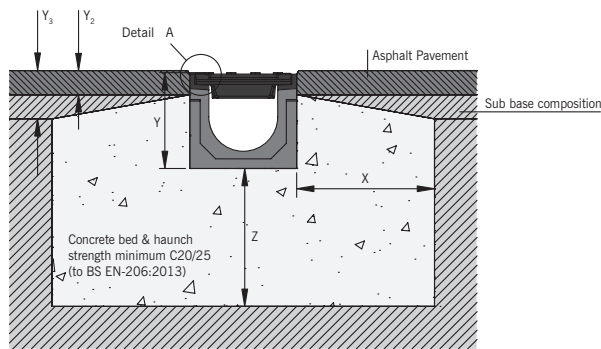


835 grating lifting tool

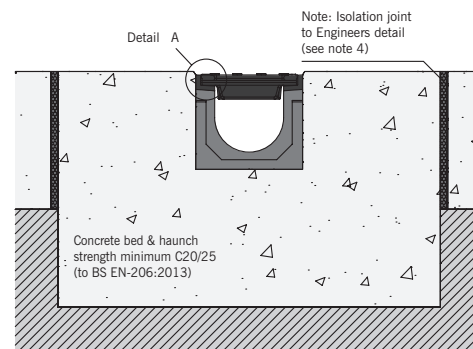
Installation detail

ACO S RANGE LOAD CLASS F 900

Asphalt pavement



Concrete pavement



1.0 Load Class

Installation recommendations shown are ACO minimum recommendations for BS EN 1433:2002 load class requirements.

2.0 Ground Conditions

The long term performance of a channel installation to sustain vertical and lateral loads depends upon A) ground conditions B) stability of the adjacent pavement and C) a durable concrete bed and surround. The recommended installation detail may require the minimum dimensions to be revised to achieve site specific load class requirements (referred to in 1.0 above).

3.0 Cutting and Jointing

Mitre joints are formed by cutting the channels to the required angle and butting them together with appropriate sealant (e.g. Sikaflex 11FC or similar) or ACO Repair Kit. Where possible 90° joints and T's should be formed so that gratings do not have to be cut. Angles can be formed by connecting them using proprietary PVCu pipework attached to ACO inlet/outlet endcaps. For further details please contact ACO Design Services Team.

Note: For Load Classes higher than C 250, mitred joints are not recommended in vehicular areas. Where requested ACO can custom manufacture angled junctions to order.

4.0 Isolation Joints

The channel must be isolated from the surrounding environment. An isolation joint must be positioned up to 1500mm from the channel wall. Any dowel bars must be located no nearer than 150mm from the channel wall. Other isolation joints in surrounding slab must be continued through the channel.

Additional crack control may be required to comply with specifier requirements.

5.0 Installation into in-situ Slab

Where a channel is to be installed into an existing concrete slab it is necessary to cut a suitably sized pocket in the slab. The channel will then need to be bedded in polymer modified mortar of 25mm minimum thickness (this may vary depending on the type of mortar used). Engineering advice may be necessary.

6.0 Temporary Installation

A channel installation is not complete until the final surfacing is laid. In any temporary condition, i.e. with the channel walls projecting above adjacent ground, site traffic should not cross channels. Loose boards, stone fill or cover plates will not protect the channel walls or grating. A temporary channel crossing should be formed by raising the ground level locally, to 3 - 6mm above top of edge rail, either side of a channel for a distance of 750 to 1000mm, to form ramps. Note that the channel load class should be adequate to carry the site traffic.

7.0 Block Pavements

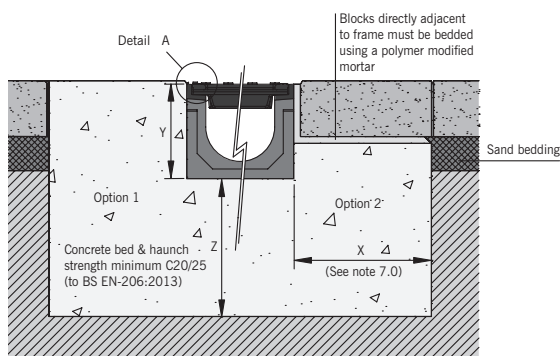
The channel must be supported laterally. Blocks laid directly against a channel must be laid as a soldier course and restrained from movement by bedding securely on the concrete haunch e.g. by using a polymer modified mortar for bed and perpendicular joints (e.g. RONAFIX mortar mix C or similar). Blocks or slabs bedded on sand remote from the channel should be set at a higher level to compensate for possible settlement of the paving in service.

8.0 Grate Locking System

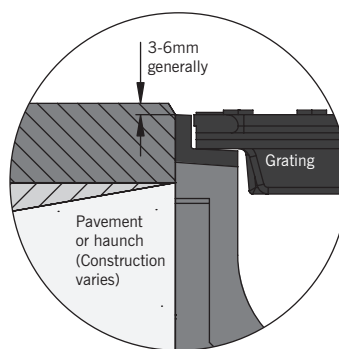
Gratings should be securely fixed to the channel, where required, using an appropriate grate lock system (where available).

Where the grate locking system incorporates fixing bolts, these should be tightened to the torque of 40Nm.

Block pavement options 1 and 2



Detail A



9.0 Channel Protection

Avoid contact between compaction equipment and top of ACO channel edge rail. The installer must ensure that the finished surface level lies above the top of the edge rail (by at least 3-6mm). Covering or protecting the grating, before concreting the haunch or laying blocks, removes the time and cost associated with cleaning the channel and grating of cement material and embedded stones. (Please note that ACO channels must be installed with the grating in place to prevent deformation of the channel).

10.0 Watertight installation to BS EN 1433:2002

Where ACO channel joints/fittings and channel/pavement interfaces are to be sealed, an appropriate sealant must be used (e.g., Silkaflex 11FC or similar).

Guidance on the necessary surface preparation and/or priming should be sought from the sealant manufacturer.

Best practice and workmanship

ACO can give guidance with respect to the most suitable methods of installation for each of the products in the ACO S Range. ACO S Range should be installed using acceptable levels of workmanship and according to the National Code of Practice (UK: BS8000: Part 14: 1989) in keeping with EN 1433:2002 (Drainage channels for vehicular and pedestrian areas).

Detailed installation statements and methodologies will vary for all sites as each will have different aspects deserving particular consideration, consequently the relevant approvals should be sought from the consulting engineer and/or the installer.

For further information please contact our Design Services Team (technical@aco.co.uk) or the ACO website www.aco.co.uk

11.0 Minimum dimensions of concrete surround

Load Class		F 900*
Minimum dimensions (mm)	x	200
	y	Full depth of channel (Less Y2 if necessary)
	z	200
Maximum dimensions (mm)	Y2	35
Asphalt pavement only	Y3	70

*Not suitable for carriageways or roads or motorways



These details are available to download in DWG or PDF format from the ACO website. Please go to www.aco.co.uk and sign in or register to access this information.

Chemical resistance chart

Vienite®, ACO's sustainable high strength material, has a high resistance to dilute acids and alkalis, and are unaffected by road salt, fuel and oil, and other commonly encountered chemicals. Further details of the chemical resistance can be obtained from the ACO Water Management Design Services team or, for particular chemicals, samples of the polymer concrete can be supplied to customers for their own testing. The chemical resistance will also depend on the temperature of the effluent. Clean water should not exceed 80°C.

The resistance of the gratings and edge rails should also be considered.

This chemical resistance chart refers to chemicals at ambient temperatures (20°C) and the results are for general guidance only.

Chemical medium	% conc	Resistance: Polyester concrete	Chemical medium	% conc	Resistance: Polyester concrete
Acetic acid, glacial	100	No	Hydrobromic acid	48	Yes
Acetic acid	10	Yes	Hydrochloric acid	10	Yes
Acetic anhydride	100	No	Hydrofluoric acid	10	No
Acetone	10	No	Hydrogen peroxide	30	Yes
Acetone	100	No	Lactic acid	100	Yes
Alum	100	Yes	Lead acetate	100	Yes
Aluminium sulphate	100	Yes	Magnesium chloride	100	Yes
Ammonium chloride	100	Yes	Magnesium sulphate	100	Yes
Ammonium nitrate	100	Yes	Maleic acid	100	Yes
Ammonium phosphate	65	Yes	Methyl ethyl ketone (MEK)	100	No
Ammonium sulphate	100	Yes	Motor oil	100	Yes
Aniline (aminobenzene)	100	No	Nickel chloride	100	Yes
Barium chloride	100	Yes	Nickel sulphate	100	Yes
Benzaldehyde	100	No	Nitric acid	5	No
Benzene	100	No	Nitrobenzene	100	No
Benzyl alcohol	100	Yes	Oleic acid	100	Yes
Benzyl chloride	100	No	Oxalic acid	100	Yes
Borax	100	Yes	Perchloric acid	10	Yes
Boric acid	100	Yes	Perchloroethylene	100	Yes
Bromine	100	No	Phosphoric acid	20	Yes
Bromine water	Saturated	No	Phosphorus trichloride	100	No
Butyl acetate	100	No	Potassium carbonate	50	Yes
Butyric acid	100	Yes	Potassium chloride	100	Yes
Calcium carbonate	100	Yes	Potassium dichromate	100	Yes
Calcium chloride	100	Yes	Potassium hydroxide	10	Yes
Calcium chlorate	8	Yes	Potassium nitrate	100	Yes
Calcium hydroxide	100	Yes	Potassium permanganate	10	No
Calcium nitrate	100	Yes	Potassium sulphate	100	Yes
Carbon disulphide	100	No	Pyridine	100	No
Carbon tetrachloride	100	Yes	Sodium acetate	100	Yes
Castor oil	100	Yes	Sodium bromide	100	Yes
Chlorine gas, wet	100	No	Sodium carbonate	35	Yes
Chlorine water	Saturated	No	Sodium chlorate	100	Yes
Chlorobenzene	100	Yes	Sodium chloride	100	Yes
Chloroform (trichloro-methane)	100	No	Sodium hydroxide (caustic soda)	50	No
Chromic acid	12	Yes	Sodium hypochlorite	18	No
Citric acid	100	Yes	Sodium nitrate	100	Yes
Copper chloride	100	Yes	Sodium nitrite	100	Yes
Copper nitrate	100	Yes	Sodium phosphate	10	Yes
Cyclohexane	100	Yes	Sodium sulphate	100	Yes
Diesel fuel (DERV)	100	Yes	Sodium sulphide	100	Yes
Dimethyl formamide	100	No	Sodium sulphite	100	Yes
Dimethyl phthalate	100	Yes	Sodium thiosulphate	100	Yes
Diethyl phthalate	100	Yes	Stearic acid	100	Yes
Ethanol	95	No	Styrene	100	No
Ethanolamine	100	Yes	Sulphuric acid	75	No
Ethyl acetate	100	No	Sulphuric acid	50	Yes
Ethylene glycol	100	Yes	Sulphuric acid at up to 40°C	10	Yes
Ferrous chloride	100	Yes	Tetrachloroethylene	100	Yes
Ferric chloride	100	Yes	Thioglycolic acid	80	Yes
Ferrous sulphate	100	Yes	Thionyl chloride	100	No
Formaldehyde	30	Yes	Toluene	100	Yes
Formic acid	10	Yes	Toluene sulphonc acid (aqueous solution)	Saturated	Yes
Formic acid	100	No	Trichloroacetic acid	50	Yes
Fuel oil	100	Yes	Turpentine	100	Yes
Gasoline	100	Yes	Water	100	Yes
Glycerine	100	Yes	Xylene	100	Yes
Hydrazine	50	No	Zinc sulphate	100	Yes



Specification clause

The surface drainage system shall be ACO Drain S100/S150/S200/S300† channel system as supplied by ACO Technologies plc; all materials and components within the scope of this channel system shall be obtained from this manufacturer. The system shall be certificated to Load Class F 900 as defined in BS EN 1433:2002; load test certificates shall be supplied to the Supervising Officer.

Declarations of Performance (DoP) shall be supplied to the Supervising Officer upon request. The system shall be of 100mm/150mm/200mm/ 300mm† nominal internal width, manufactured in polyester resin concrete with cast-in grey iron edge rails. The channels shall be installed with manufacturer's grating appropriate to the Load Class of the place of installation and locked securely in place using 4 bolts per half metre.

The system shall be installed in accordance with the manufacturer's printed instructions, and the work carried out as specified in drawing no. (*) and in accordance with recognised good practice. Standards of workmanship shall generally be as specified in BS EN 752:2008 and BS 8000:Part 14:1989.

* insert appropriate information
† delete non-appropriate information

Recycled content

ACO Technologies aim to incorporate as much recycled material or waste material as is practicable in their manufactured products. Typically, cast iron materials contain 40% to 90% recycled iron. The total recycled content of each product in the ACO S Range system will vary as the proportion of the different materials (in channels, edge rails, gratings etc.) varies.

The ACO S Range products are themselves intended for a long life with low maintenance, to reduce the need to recycle, but when eventually they are no longer needed, much of their content can be readily recycled with a very low risk of pollution to the environment.

NBS Specifications

ACO S Range should be specified in section Q10:180. Assistance in completing this clause can be found in the ACO Water Management entry in NBS Plus, or please contact the ACO Water Management Design Services Team.

Note: A specification in NBS format is available to download from www.thenbs.com or www.aco.co.uk

Conformity

The ACO S Range system is fully certified to BS EN 1433:2002 and CE marked in accordance with the Construction Products Regulation.

Declarations of Performance are available on the side bar via the product page on our website (www.aco.co.uk/products/s-range), or on request. Please contact ACO Water Management Design Services Team on 01462 816666 for further information.

BS EN 1433:2002



General information

ACO products are subject to weight and dimensional tolerances. The weights and dimensions shown in this document are for guidance purposes only. ACO products are made from naturally occurring materials and may be subject to variations in colour, texture and marking. These aesthetic variations do not affect the performance or functionality of our Goods. The appearance of products shown in our company documentation are for illustration purposes only.