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to find out more

## Swarm Aqua®

### 1 Ductile Iron Top

By making use of high grade ductile iron, the only section of Swarm Aqua® exposed to traffic and the elements is strong, durable and easily lost in its surroundings for a truly unobtrusive surface finish.

### 2 Heelsafe 10mm Openings

Swarm Aqua® is safe for use in areas of high pedestrian traffic as at the surface level only two 10mm openings are visible. Available for up to F900 loading applications. An A15 steel top is also available.

### 3 Steel Walls

Everything beneath the ductile iron top can be thought of as a concrete former. Steel walls provide excellent rigidity to keep the channel shape intact throughout the installation process.

### 4 Twinwall HDPE Channel

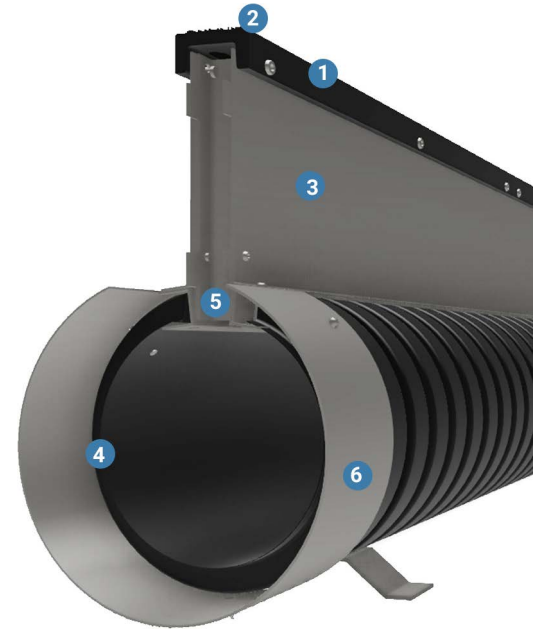
The plastic channel section of Swarm Aqua® is manufactured from 100% recycled materials and is resistant to a wide range of chemicals. Its design life is around 60 years.

### 5 Spacers

To prevent pinching on the throat section when the channel is installed, spacers and the ductile iron top help keep the channel in shape. These spacers also act as locators to ensure a positive connection between channel units.

## Simple Installation

To keep things as simple as possible, you don't have to assemble Swarm Aqua® on site. It's as simple as push-fit connections and a full range of easy to use accessories.



Swarm Aqua® is a hybrid surface water drainage system that combines the benefits of proven materials and robust manufacturing techniques to create an exceptional surface water drainage product for external use. With a focus on strength, rigidity and lighter weight, Swarm Aqua® provides the perfect solution.

A strong, durable ductile iron top section (with an option of steel for pedestrian use), combined with steel side walls and Twinwall conduit ensures that the product is ideal for external drainage applications.

### ● Product Rigidity

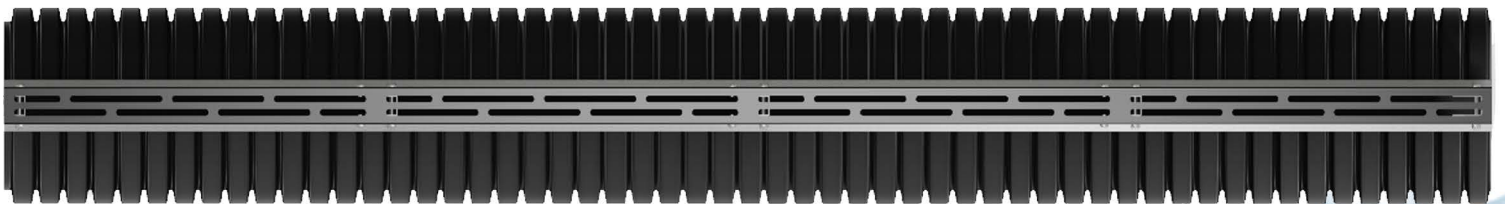
Swarm Aqua® Cast was designed to cater for up to F900 applications. With a strong, precision engineered cast iron top this is the perfect solution for applications where both aesthetics and functionality are required.

### ● Steel Top

Also available with a steel or stainless steel top, Swarm Aqua® can be utilised in pedestrian areas up to A15 loading where it is important to achieve a superior aesthetic finish.

### ● Up to F900 Loading

When installed with a full concrete surround, Swarm Aqua® can be used in areas of ultra-heavy loading traffic, up to F900.



Code	Description	Product Specification					Trench	
		Loading	Weight	Length	Height	Invert	Width	Depth
SA01	100mm Swarm Aqua	F900	24kg	2.0m	282mm	262mm	512mm	412mm
SA02	150mm Swarm Aqua	F900	25kg	2.0m	348mm	328mm	578mm	478mm
SA03	225mm Swarm Aqua	F900	28kg	2.0m	435mm	415mm	665mm	565mm
SA04	300mm Swarm Aqua	F900	31kg	2.0m	524mm	504mm	754mm	654mm
SA05	375mm Swarm Aqua	F900	37kg	2.0m	596mm	576mm	826mm	726mm
SA06	450mm Swarm Aqua	F900	41kg	2.0m	682mm	662mm	912mm	812mm
SA07	600mm Swarm Aqua	F900	56kg	2.0m	850mm	830mm	1080mm	980mm



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Swarm Aqua® can be installed within many locations and detailed installation guidelines are available for each. Typical finishes are concrete, paving and asphalt. drawings for each installation detail are available online at [www.swarmwm.co.uk](http://www.swarmwm.co.uk)

### 2m Channel Units

To aid in handling, installation and delivery, Swam Aqua® channels are supplied in 2m units. When specified on drawings or within a schedule of parts, 2m units are supplied as standard.

Code	Description	Product Information							Trench Dimensions		
		Loading	Weight	Length	Width	Height	Invert	Opening	Width	Depth	Reinforcement
SA01	100mm Swarm Aqua®	F900	24kg	2.0m	112mm	282mm	262mm	14490mm <sup>2</sup>	512mm	412mm	Rqd for F900
SA02	150mm Swarm Aqua®	F900	25kg	2.0m	178mm	348mm	328mm	14490mm <sup>2</sup>	578mm	478mm	Rqd for F900
SA03	225mm Swarm Aqua®	F900	28kg	2.0m	265mm	435mm	415mm	14490mm <sup>2</sup>	665mm	565mm	Rqd for F900
SA04	300mm Swarm Aqua®	F900	31kg	2.0m	354mm	524mm	504mm	14490mm <sup>2</sup>	754mm	654mm	Rqd for F900
SA05	375mm Swarm Aqua®	F900	37kg	2.0m	426mm	596mm	576mm	14490mm <sup>2</sup>	826mm	726mm	Rqd for F900
SA06	450mm Swarm Aqua®	F900	41kg	2.0m	512mm	682mm	662mm	14490mm <sup>2</sup>	912mm	812mm	Rqd for E600
SA07	600mm Swarm Aqua®	F900	56kg	2.0m	680mm	850mm	830mm	14490mm <sup>2</sup>	1080mm	980mm	Rqd for D400

### Reinforcement

In order to meet some loading criteria, Swarm Aqua® channels may require reinforcement within the concrete surround. The responsibility to design the reinforcement is that of the project engineer, however Swarm can provide independently generated structural guidelines for these scenarios.

### Accessories

Swarm Aqua® channels are designed to be as simple as possible. That's why the accessories shown on this page can be used in all surface finishes, all load ratings and with both cast iron and steel tops.

### Combined Access/Outlet Boxes

Universal access & outlet boxes to allow for both rodding access and outfall into external water systems.

Code	Description	Weight	Length	Width	Depth
SD01	Small Box	31kg	524mm	450mm	610mm
SD02	Large Box	48kg	605mm	675mm	750mm

### End Caps

A simple steel plate to cap open ends where access units aren't required.

Code	Description	Weight	Length	Width	Depth
SB01	100mm End Cap	1kg	1.5mm	112mm	112mm
SB02	150mm End Cap	1kg	1.5mm	178mm	178mm
SB03	225mm End Cap	1kg	1.5mm	265mm	265mm
SB04	300mm End Cap	2kg	1.5mm	354mm	354mm
SB05	375mm End Cap	2kg	1.5mm	426mm	426mm
SB06	450mm End Cap	2kg	1.5mm	512mm	512mm
SB07	600mm End Cap	3kg	1.5mm	680mm	680mm

### Transition Pieces

Used to connect one Swarm Aqua® Channel to the next when there is a change in size.

Code	Description	Weight	Length	Width	Depth
SC01	100/150	1kg	1.5mm	178mm	198mm
SC02	150/225	1kg	1.5mm	265mm	285mm
SC03	225/300	1kg	1.5mm	354mm	374mm
SC04	300/375	2kg	1.5mm	426mm	446mm
SC05	375/450	3kg	1.5mm	512mm	532mm
SC06	450/600	3kg	1.5mm	680mm	700mm

### Male and Female Ends

Swarm Aqua® channels are designed with a male and female end to make installation quick and as simple as possible. The integrated throat spacer provides a spigot for the channels to connect to each other ensuring a snug and straight fit.

### Closing Channel Joints

Once the Swarm Aqua® channels have been placed in their final locations and it is ensured that any gaps are closed, we recommend taping around the joints and the top of the channel with a heavy duty construction tape to prevent ingress of concrete during the installation process. Although this provides no structural support it can help to keep the channel debris free during installation.

### Maintenance

Swarm Aqua® channels can be rodded from the combined boxes, however general maintenance can be achieved by jetting from one end or through the slots in the surface finish as required. The maximum jetting pressure that can be safely applied to the Twinwall pipe section of Swarm Aqua® channels is 180 Bar or 2500 PSI.



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