



Modular Eel Pass

FLEXIBLE | ROBUST | EFFECTIVE | SUSTAINABLE



FLEXIBLE- Modular design allows endless combinations to optimise route

ROBUST- HDPE and Aluminium makes pass lightweight yet shock absorbent.

EFFECTIVE- Experienced specialists to assist in design of optimum pass

SUSTAINABLE- Recyclable materials, standard designs cut down waste



ACE modular eel passes are designed to allow a safe passage route for eels and elvers, manufactured in standard sections to allow routing in any configuration.

ACE can supply modules to your requirements, but also offer site survey and expert design services, to provide a 3d visualisation and drawings indicating the layout of the intended pass route.

ACE also provide pump control systems, monitoring systems and installation packages to offer a full turnkey service, including CDM management as required.

For more information on our services, please contact ACE to discuss your requirements.



Contents are accurate at the time of production, however are for illustration only. For critical technical information, please contact ACE for assistance.

Aquatic Control Engineering Ltd

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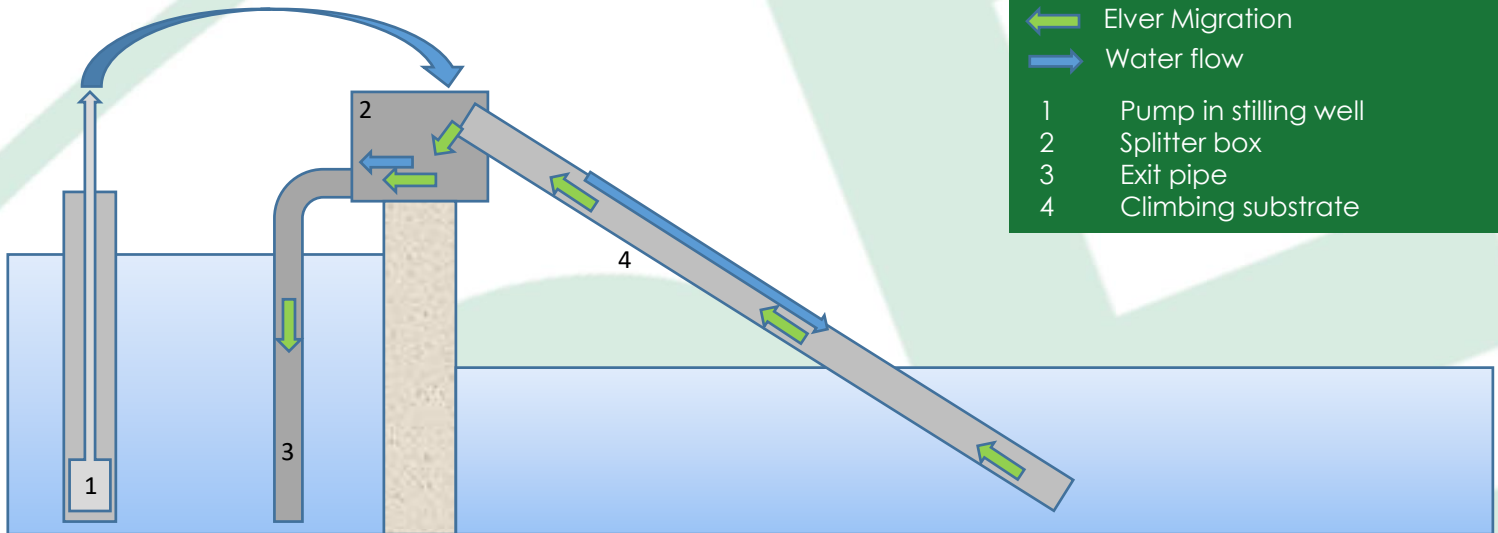
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Aquatic Control Engineering are market leaders of innovative water flow control, maintenance and fish passage equipment. We are proud to supply our customers with high quality, innovative solutions and high standard installation services for over 20 years.



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Design Fundamentals

Eelers migrate upstream, to allow them to grow in suitable habitat, however modern watercourse management often presents obstacles in the form of weirs, pumping stations and dams. Traditionally, Eelers would pass these structures either through leaking seals, or over wet ground, however they risk injury in doing so. An eel pass therefore provides a suitable route with substrate around the structure.

Eelers have a natural instinct to swim towards any source of water which is fresher, so are attracted to water flowing from upstream in watercourses. They also tend to track the margins of the watercourse, near to the surface of the water.

When designing an eel pass, the section that enters the water would ideally have easy access, near the edge of the watercourse, and have a strong attraction flow. The climbing section should have a substrate suitable for the target species, to a summit, usually in the form of a splitter box.

At the summit, the eels should be “washed down” from the crest, either into a holding tank (if trapping for monitoring) or into an exit chute to the upstream watercourse. The wash down flow needs to ensure eels cannot congregate around the flushing source, and if used for trapping, the box would require a flow of water to maintain freshness.

A typical pass is indicated above, however please contact ACE for advice if in any doubt.

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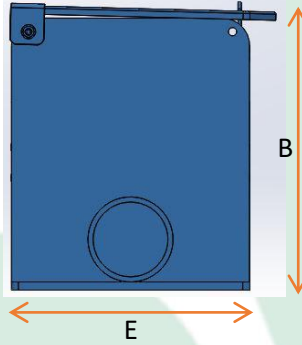
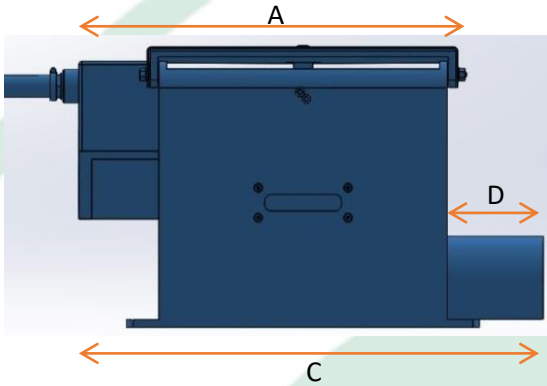
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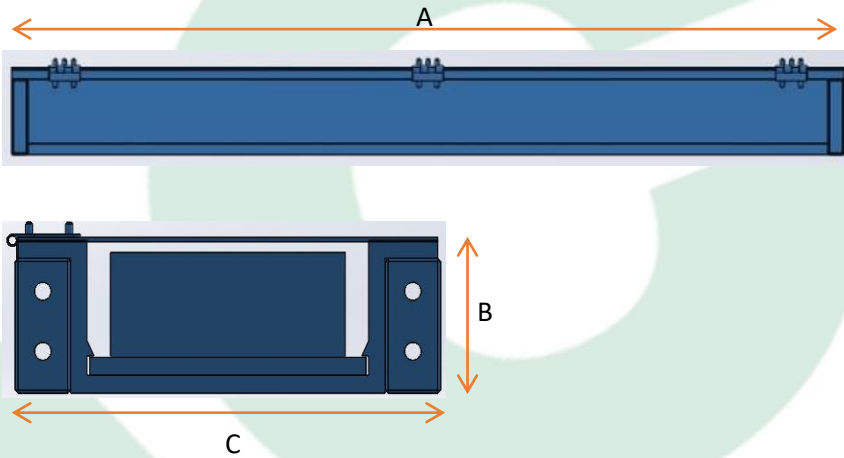
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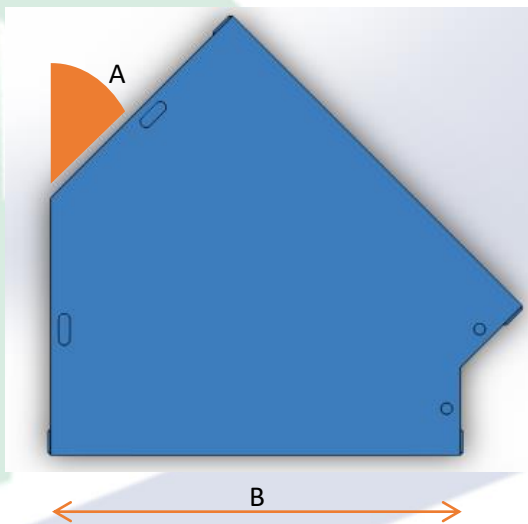


Monitoring Box	
Dim.	Value
A	575mm
B	410mm
C	725mm
D	150mm
E	350mm
Material	HDPE

The monitoring box features a valve manifold for controlling flow, an exhaust port which can be used for additional attraction flow, and options for free-passage or trapping. Standard box also includes locking lid and connection to standard channel and 125mm HDPE pipe.



Straight Eel Channel Section	
Dim.	Value
A	250,500,750,1000,1250,1500mm
B	104mm
C	308mm
Pass	HDPE Channel, Aluminium lid
Substrate	20 or 30mm pitch brush



Lateral Eel Channel Section (Horizontal corners)	
Dim.	Value
A	5,10,15,20,25,30,35,40,45,90°
B	308mm
Materials	HDPE and Aluminium
Substrate	20 or 30mm pitch brush

When designing an eel pass layout, please ensure that before using a lateral corner, the connecting sections are levelled to horizontal (i.e. a sloped channel needs to be fitted with a descent/ascent prior to the corner to ensure the corner is not sloped).

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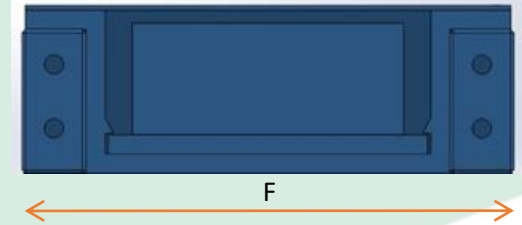
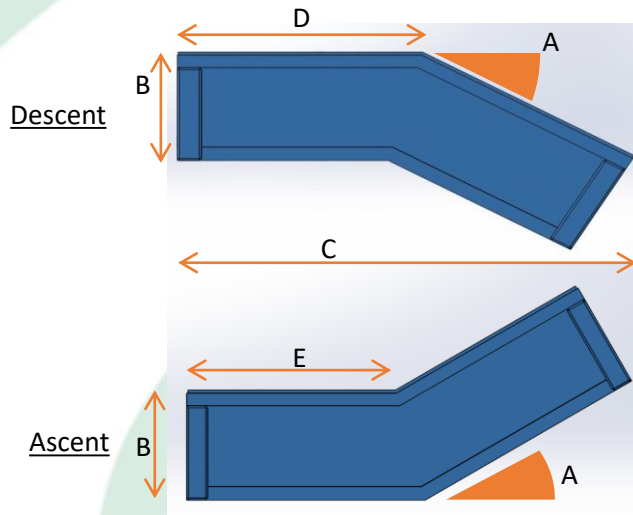
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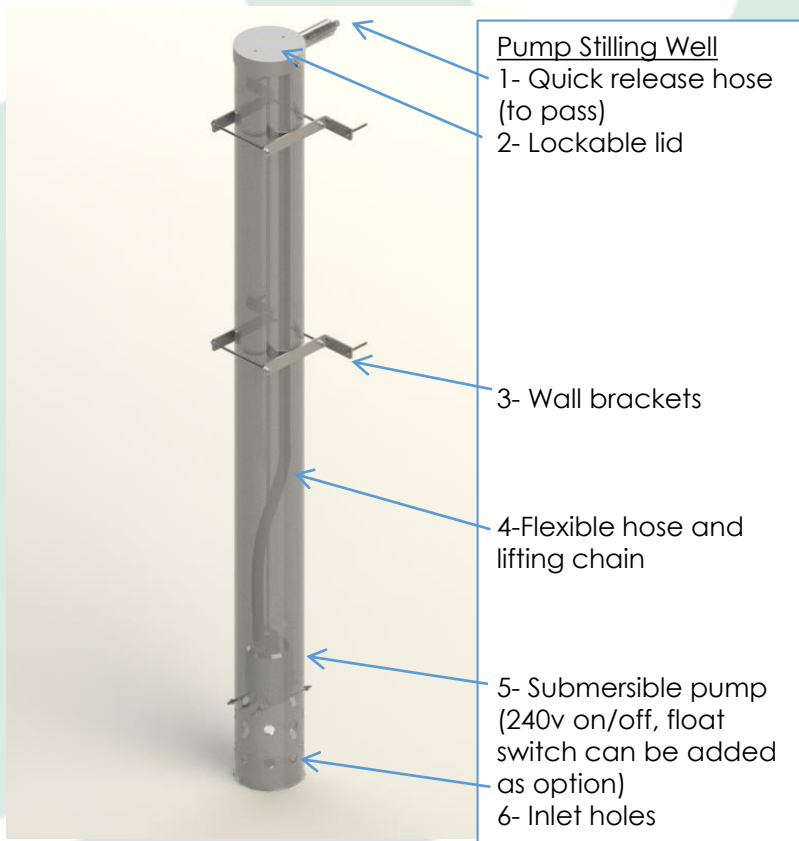


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Ascent/Descent Sections	
Dim.	Value
A	5,10,15,20,25,30,35,40,45°
B	104mm
C	308mm
D	200mm
E	200mm
F	308mm
Materials	HDPE and Aluminium
Substrate	20 or 30mm pitch brush



- Pump Stilling Well**
- 1- Quick release hose (to pass)
- 2- Lockable lid
- 3- Wall brackets
- 4- Flexible hose and lifting chain
- 5- Submersible pump (240v on/off, float switch can be added as option)
- 6- Inlet holes

Other components:

- Pipe diameter: 110mm ID, 125mm OD
- Couplings: Plasson fusion welded couplings or Flex seals
- Fixings: All A4 Stainless Steel, with Resin anchor where applicable.
- Flange Gaskets: EPDM open cell
- Lid Hinges: Stainless Steel 316

Pumped passes are usually powered using 240v mains power, ensuring reliability and sufficient water flow. In some instances, battery or solar power is possible, however there may be limitations on operation time. In all cases, the pump is controlled via a control panel, allowing the pump to be run full-time, on a timer or during hours of darkness. We can also include telemetry output to alarm if the pump stops running, to prevent the pass drying out.

ACE also offer advice and design services for gravity fed eel passes, vertical boards systems and eel/lamprey tiles. Our in house design team will assist in the selection of the optimum type of pass, and are experienced in design and manufacture of bespoke equipment for any special requirements.

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