

# Micro Pump Stations



# Pump Options

Direct Drainage compact pumping stations provide the perfect solution for managing effluent or sewage, depending on the pump, distance and height.

Our range of compact pumping stations can be used for effluent or sewage and are easy to install.



## Effluent Pump

- ✓ Up to 8m Head
- ✓ 230V Single Phase
- ✓ 2.75L p/Second
- ✓ 1 1/4" Connection
- ✓ Centrifugal Type



## Sewage Pump

- ✓ Up to 11m Head
- ✓ 230V Single Phase
- ✓ 6.6L p/Second
- ✓ 2" Connection
- ✓ Vortex Type

# Features & Applications

- ✓ Non-return valves, internal pipe and outlet pipe compression coupling included
- ✓ Complete pre-kitted solution ready for installation.
- ✓ Fully automatic
- ✓ Can be paired with high-level alarms and telemetry systems
- ✓ Robust, durable and corrosion free, stainless steel submersible pumps.
- ✓ MDPE chamber with flanged bottom

Quick and easy to install and maintain the compact range is ideal for use in:



**Outbuildings**



**Basements**



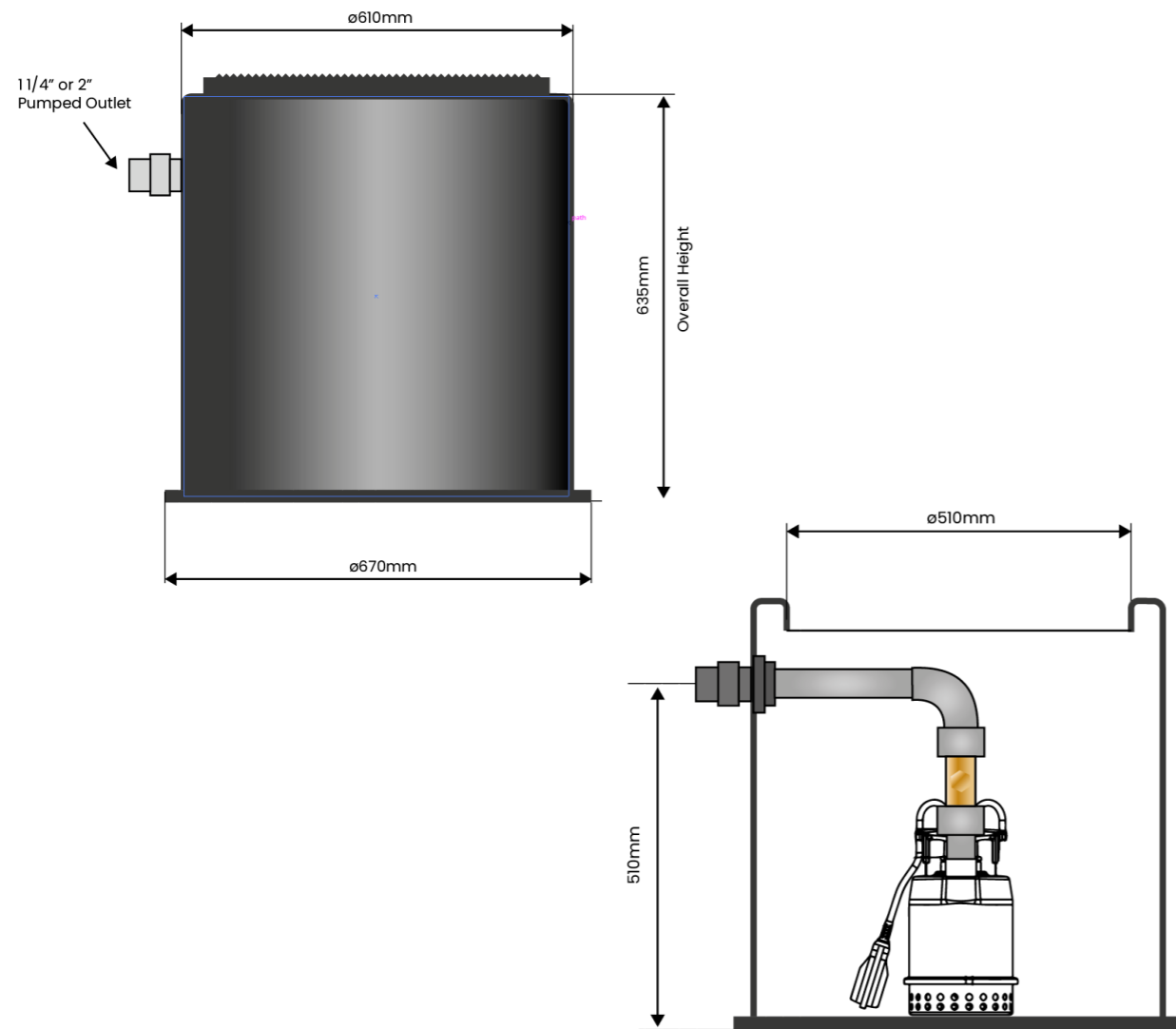
**Outdoor WC**



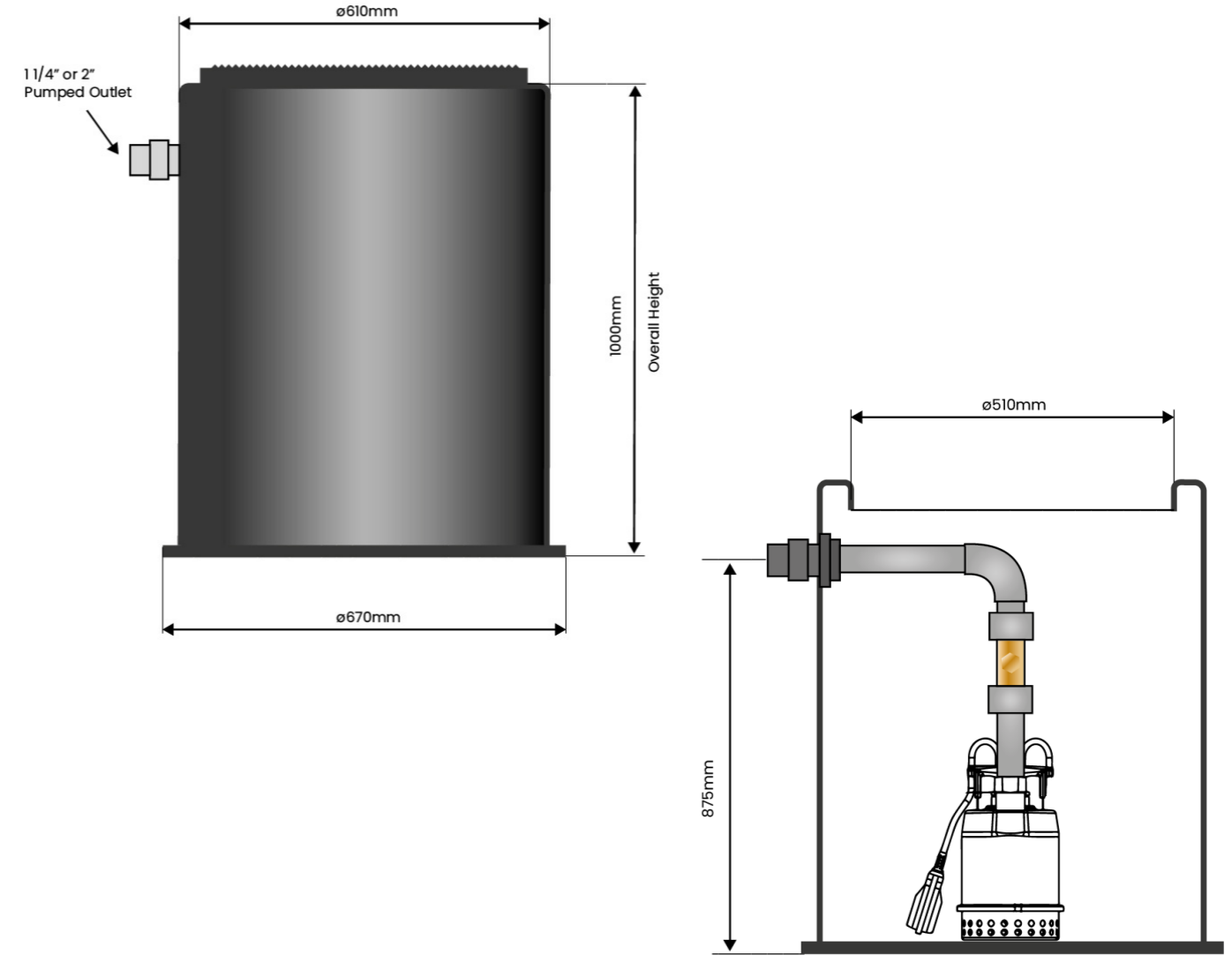
**Extensions**

# Chamber Sizes

## 190L



## 300L



Chamber Dimentions			Access Cover	
Diameter	Height	Capacity	Size	Rating
610mm	635mm	190L	450mm	Pedestrian

Chamber Dimentions			Access Cover	
Diameter	Height	Capacity	Size	Rating
610mm	1000mm	300L	450mm	Pedestrian

## Inlet

The micro pump station range can be provided with a 110mm inlet seal. A 140mm hole saw will be needed to fit the seal. The 110mm inlet seal can be drilled anywhere on the chamber but no lower than 200mm from the base of the tank. This is to ensure the pump can operate correctly.

## Cable Duct Pipework

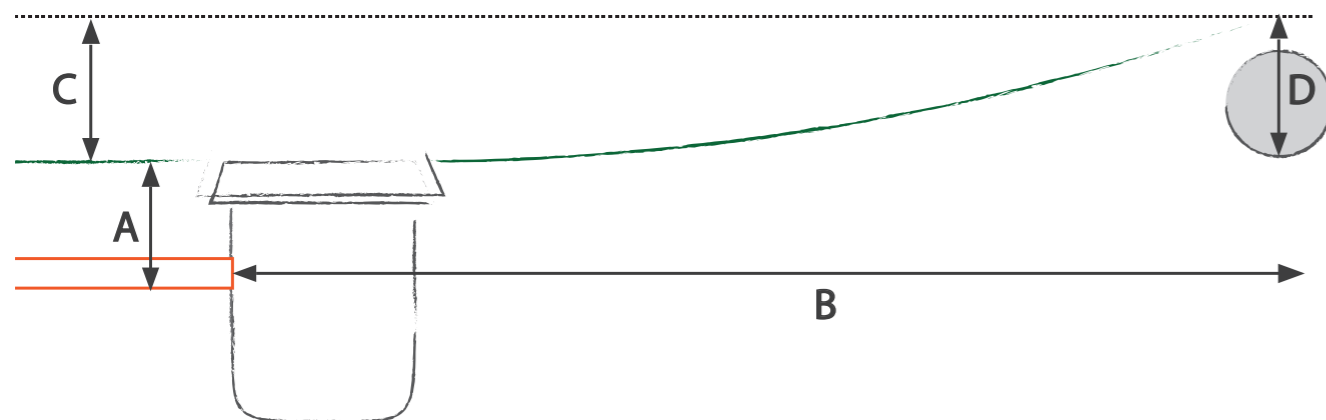
This range is designed to accept 40mm standard low pressure push fit pipework.

## Electrical Connections

The pump and high-level alarm (if ordered) are to be electrically connected to a non switched fuse spur (a total of two). These spurs should have their own dedicated supply from the main fuse board. It is advisable to leave 500mm of the pump cable in the sump to allow for servicing of the pump if removed from the chamber

## Pump Float

Ensure the float does not touch the chamber sides. It may be necessary to rotate the pipework on a pump to achieve this as there may have been some movement during transit.



# Sizing Guide

<b>Pumping Distance (A)</b>	Meters
<b>Pumping Lift (B)</b>	Meters
<b>Discharge Height (C)</b>	Meters
<b>Proposed Inlet Depth (D)</b>	Meters
<b>Inlet Size</b>	110mm <input type="radio"/> 160mm <input type="radio"/>
<b>Type of Application</b> ie. 1 House, 2 Houses, Pub	
<b>Number of Users</b>	
<b>Material Application</b>	Sewage <input type="radio"/> Surface <input type="radio"/> Effluent <input type="radio"/>
<b>Power Supply</b>	Single <input type="radio"/> 3Phase <input type="radio"/>
<b>New Lay or Existing Rising Main</b>	Existing <input type="radio"/> New <input type="radio"/>
<b>Size of Rising Main (if Existing)</b>	
<b>Pumping to (Public/Private Sewer, Treatment Plant etc.)</b>	
<b>24 Hour Storage Required</b>	

# Install Guide

Select a suitable location for the pump system. Check that no other structure – or special access – is required over the selected spot. Provision can always be made, if necessary, to place the tank on a roadway, provided that protective backfill is placed around it and a suitable duty manhole cover & frame is used over the opening.

Important: Check that no underground cables, pipes or service ducts lie beneath.

- 1** Excavate the minimum opening in the ground to receive the tank and pipework to be used. If a machine is used to remove the spoil, the sides of the excavation should be battened for stability and a sump left in the one corner for dewatering purposes.
- 2** The depth of excavation needs to be at most 500mm deeper than the overall tank (plus extra roof slab – if applicable) depth. This extra depth is required to allow for the construction of a hardcore/concrete base. If the excavation is dug by hand, the sides will require shoring up for safety, to prevent earth slippage. *A dewatering pump may be required to control any ground water present.*
- 3** Some clean hardcore should be placed and consolidated in the base of excavation. Usually, this will need to be about 200mm thick.
- 4** Lay concrete (minimum grade 25) to a minimum thickness of 150mm on top of hardcore. Compact well down.
- 5** Lower the tank onto the damp concrete base, allowing the base feet/mouldings (if fitted/feet not fitted on tanks smaller than 1m diameter), to settle in. Ensure correct orientation of the inlet/outlet pipes and other connections.
- 6** If the inlet socket(s) is positioned less than 500 mm up from the base of the tank, make this connection at this point

- 7** Fill the tank with approximately 700mm of water.
- 8** Pour concrete surround in situ to a thickness of approx. 100mm and to a height of 600mm from concrete base using minimum grade 25 concrete. The concrete must be evenly poured around the tank periphery, and must not exceed the depth of water in the tank. The concrete should be vibrated to leave no voids. Care must be taken to ensure that any pipes (or other connections) made are not damaged. Concrete will secure into position any pipes that have been connected. During concrete pour, ensure that the tank is vertical (by use of a spirit level across the tank's opening). Additionally, ensure that the tank is at the correct depth level. Allow this concrete "anchor" to set.
- 9** DO NOT REMOVE THE WATER FROM THE TANK. We recommend that the tank is fully enclosed in concrete to provide extra support.
- 10** THE CONCRETE MUST BE EVENLY Poured AROUND THE TANK PERIPHERY AND MUST NOT EXCEED THE DEPTH OF WATER IN THE TANK – THE WATER LEVEL SHOULD BE GRADUALLY RAISED (CONSISTENT WITH THE INCREASING LEVEL OF CONCRETE Poured) AND SHOULD REMAIN 100MM HIGHER THAN THE CONCRETE BACKFILL. LEAVE THE WATER IN THE TANK UNTIL THE CONCRETE HAS SET FULLY.  
  
Make connections of site pipework, cable duct @ 3" MIN DIA and vent (if applicable),  
  
(If required) construct concrete cover slab (with access opening) of maximum 200mm thickness, ensuring that the slab is supported by consolidated back fill. Or utilise engineering-brick courses to the sides of the GRP opening/manway, again these must be supported by consolidated backfill/concrete.  
  
The access cover/frame would have been supplied unattached from the tank. Set frame into concrete cover slab or onto brick courses.  
  
Construct concrete plinth for control panel kiosk (where applicable)  
  
Empty the tank of water, ensuring that any debris is removed at the same time. Partly refill the tank with clean water for testing the system upon commissioning, and to facilitate a flush-through of the discharge pipe prior to sewage/drainage pumping.

**Continued...**

- 11** Install the pumps and float switches (and interconnecting cables - where extensions are required), drawing these electrical cables through the cable duct to the proposed position of the control panel.
- 12** Position the control panel (and kiosk - if applicable).
- 13** Provide a suitable electrical supply - this to be isolated and adjacent to the new positioned control panel. Make the final electrical connections (as per the "field connections" instruction provided with the control panel).
- 14** Commission the packaged pumping station.
- 15** Pump(s) should not be left in the pump chamber after installation if the pump station is to remain unused for any length of time. Moisture ingress may occur causing motor burn out on start up.

- 1. High Level Alarm**
- 2. Access Cover**
- 3. Vent Duct to be vented to atmosphere (optional)**
- 4. Inlet 110mm**
- 5. Rising Main**
- 6. Compression Fitting (Optional)**
- 7. Pump(s)**
- 8. Float Switch High Level Alarm (Optional)**
- 9. Integral Float Switch**
- 10. Hardcore Base & Concrete Backfill**

## Contact Us

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