



Micro & Mini Pump Stations

Single Drainage Sump & Pump

Installation Instructions and Technical Details

Installation Instructions

It is important to read these instructions which are for guidance only as it is the contractor's responsibility to satisfy himself that the installation procedure is in accordance with the prevailing ground conditions and good building practice, to eliminate any potential damage to the pump station either during or after installation.

Micro and Mini Pump Stations are manufactured from high density polyethylene and are extremely robust. However as with any pre formed chamber they are susceptible to floatation and hydrostatic pressure exerted in high water table conditions.

1. Select a suitable location for the Micro or Mini pump station
2. 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.
3. Check that no underground cables, pipes or service ducts lie beneath.
4. 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.
5. 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.
6. A dewatering pump may be required to control any ground water present.
7. Some clean hardcore should be placed and consolidated in the base of excavation. Usually, this will need to be about 200mm thick.
8. Lay concrete (minimum grade 25) to a minimum thickness of 150mm on top of hardcore. Compact well down.
9. 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.
10. If the inlet socket(s) is positioned less than 500mm up from the base of the tank, make this connection at this point.
11. **FILL THE TANK WITH APPROXIMATELY 700MM DEPTH OF WATER**

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.

DO NOT REMOVE THE WATER FROM THE TANK

We recommend that the tank is fully enclosed in concrete to provide extra support.

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.



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Installation Instructions Continued

12. Make connections of site pipework, cable duct @ 3" MIN DIA and vent (if applicable).
14. (If required) construct concrete cover slab (with access opening) of maximum 200mm thickness, ensuring that the slab is supported by consolidated backfill. Or utilise engineering-brick courses to the sides of the GRP opening/manway, again these must be supported by consolidated backfill/concrete.
15. The access cover/frame would have been supplied unattached from the tank. Set frame into concrete cover slab or onto brick courses.
16. Construct concrete plinth for control panel kiosk (where applicable).
17. 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.
18. 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.
19. Position the control panel (and kiosk – if applicable).
20. Provide a suitable electrical supply – this to be isolated and adjacent to the new positioned control panel.
21. Make the final electrical connections (as per the "field connections" instruction provided with the control panel).
22. Commission the packaged pumping station.
23. 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.



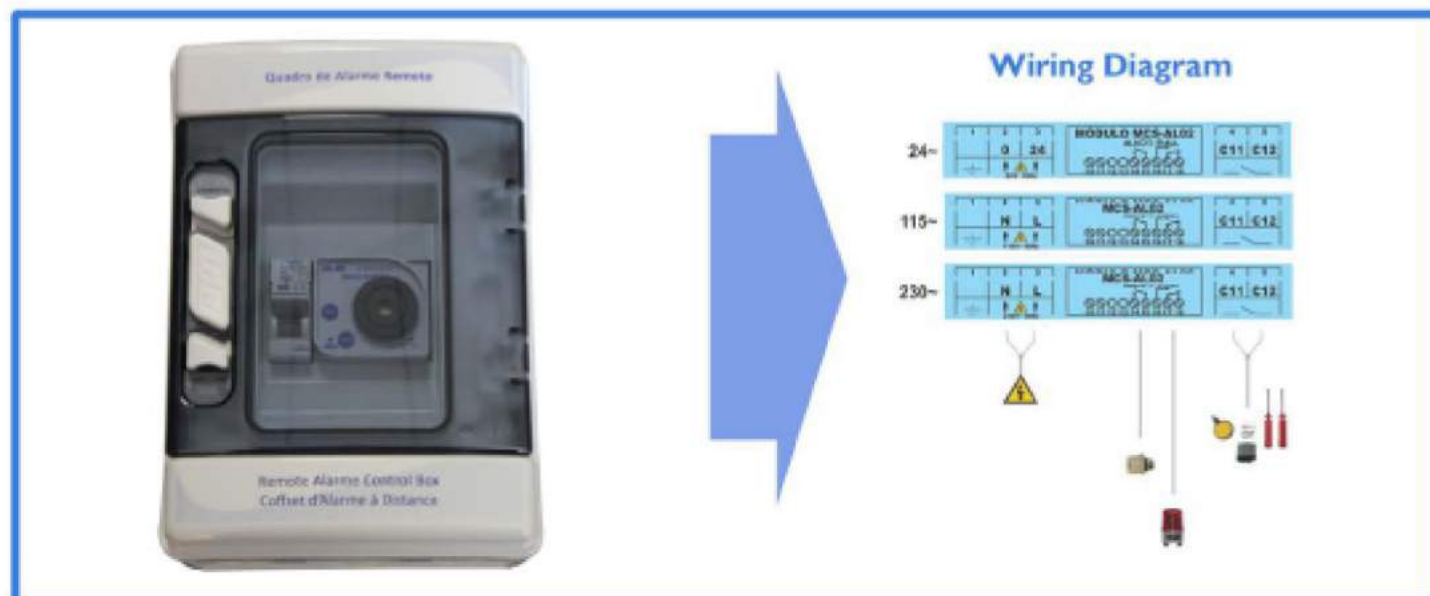
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High Level Alarm

The High Level Alarm is mounted adjacent to the Micro or Mini. An audible signal will be heard in the case of pump failure.



The float for the High Level Alarm should be attached to the pump, see picture below.

The DPT High Level Alarm is designed for systems where the alarm is placed in a different location to the control box, or in a situation where there is the need to monitor the level, pressure, or any other eventuality with an audible and visual alarm.

Everytime the alarm command (C11 - C12) closes, the audible alert will be activated and a red signal light will display. At the same time the contacts 14-15 and 17-18 on the alarm module will be armed.

By pressing the reset key (RST) both alarm outputs (14-15) and the audible alarm will be turned OFF, being necessary to momentarily cut the power supply to the control box, and the opening and consequent closing of the alarm command (C11-C12) so that the output and the audible alarm may be turned ON again. After fixing the cause of the alarm (by opening the alarm command (C11-C12)) all of the relays and signals will turn OFF.

By pressing the "TEST" key, the outputs (14-15 and 17-18) will be tested, and also the acoustic and luminous signalings.

