The Garden Angel

Installation Guide

Guidelines

Specific site conditions should be taken into consideration when designing concrete backfill and should be designed to bear any loads which may be applied during and after installation to prevent the tank from being subjected to these loads.

in locations where the excavation will not safely maintain a vertical wall, it will be necessary to shore up the sidewalks of the excavation with a suitable trenching sheet system and bracing to maintain a vertical wall from the bottom to the top of the excavation.

DO NOT completely remove the shoring system until the backfill is complete, but before the concrete fully hardens

Installation

In areas where the water table is above the bottom of the excavation or where the excavation is liable to flood, the excavation should be dewatered using a suitable pumping method.

During installation care must be taken to ensure that the body of the unit is uniformly supported so that 'point loads' on the unit are avoided.

Excavate a hole of sufficient length and width to accommodate the tank and a minimum of 250mm thickness of concrete surround - and to a depth which allows for the depth of the unit plus concrete base slab and haunch. Also taking in account proposed inlet invert depth.

Construct a suitable concrete base slab appropriate to site conditions. Ensure that the slab is flat and level.

When the concrete base slab has set enough to support the unit, lay a concrete haunch along the middle of the cast slab to provide even support under the unit.

Lower the unit onto the haunch using suitable lifting equipment It is important that the unit is level after installation to allow correct operation of the internal components.

Pour approximately 300mm depth of clean water into each chamber of the unit simultaneously. DO NOT OVERFILL.

Pour concrete backfill to approximately 300mm depth under and to the sides of the tank ensuring good compaction to remove voids.

DO NOT use vibrating pokers.

Continue pouring concrete backfill, simultaneously keeping the internal water level no more than 300mm above the backfill level at all times until the backfill is just below the underside of the outlet connection, leaving sufficient room to connect the inlet and outlet pipework.

Connect inlet and outlet drains and vent pipes when safe access to the backfill can be gained.

Should you wish to connect in and outlet pipework that is not immediately compatible with the fittings on the unit, proprietary flex seal couplings can be obtained to fit over the outside of the site pipework and the outside of separator connection.

Continue backfilling with concrete over the tank body to the required level. Build up a shell of concrete, minimum 250mm thick, around the access shaft(s). Temporarily strut the access shaft to avoid distortion.

Vent sockets should be placed as high in the access shaft as possible. Consult with local building control on exact specification of vent installation. As a minimum the vent should terminate no less than 2. 4m above the ground, and at least 1m away from any window.

Add 250mm to the tank in questions dimensions, this will show calculate your minimum excavation size.

Please see the below example installation with tank with minimum 250mm full concrete surround

Pump Satey Measures

The appliance is not intendend for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concer- ning use of the appliance by a person responsable for their safety.

Children should be supervised to ensure that they do not play with the appliance.

Before starting the pump, read this instruction booklet carefully and keep it in a safe place for future reference.

The pump must only be used for the purpose for which it was designed.

For safety reasons the pump must not be used by anyone under the age of 16 or by anyone who has not read and understood the present instructions booklet.

The power cord and floating switch must never be used to carry or move the pump. Always use the pump's handle.

When handling the pump, while it is connected to the electric power supply, you should avoid all contact with water.

Never remove the plug by pulling on the power cord.

Before taking any action on the pump, always remove the plug from the power socket.

If the power supply cord has been damaged, it must be replaced by the manufacturer or its au- thorized customer support service in order to avoid all risks.

The pump is equipped with a thermal overload safety device.

In the event of any overheating of the motor, this device automatically switches off the pump.

The cooling time is roughly 15 to 20 minutes, then the pump automatically comes on again. If the overload cutout is tripped, it is es- sential to identify and deal with the cause of the overheating. See Troubleshooting.

Use

Multi-impeller submersible pumps with buit-in electronics ideal for rain water and mains irrigation systems, for pumping water from tanks, ponds and wells and other applications that require high pressure.

The pump is equipped with a built-in electronic control unit which manages its operation (pump ON/FF) and prevents damages. The electronics protects the pump against dry running conditions:

Priming cycle: When started, the pump will perform the following operation until it is primed: four priming trials of 30" (motor ON) with pauses of 3" (motor OFF). If there is no water, i.e. if the priming trials fail, the pump will stop for an hour before trying to prime again. If also this trial fails, there will be a 5 hours pause. Afterwards, if the lack of water persists, the pump will try to prime every 24 hours until it has picked up a prime.

Normal Operation: If, during the pumps operation, the water supply is inferior to the minimum delivery for more than 40", the pump will go into alarm, and start a priming cycle. In this case the priming trials are made after 1, 5, and 24 hours until the pump picks up a prime.

The electronic unit also protects the pump from damages that could be caused by the blocking of the Not Return Valve (NRV). Such blockings are generally due to dirt deposits, or sand and they cause the pump to operate also if there is no water demand from the end-user.

The protection function stops the pump automatically every hour; if no damage is detected the pump re-starts immediately. If the VNR is blocked the pump goes into alarm and stops. In this case the pump can be re-started only after unplugging the pump and removing the obstruction to the VNR.

The best working condition is with the pump be completely submersed in water.

Starting the Pump

Given the different provisions applicable to the safety of electric systems in different countries, make sure that the pump system, as concerns its intended use, is in accordance with current legislation.

Before starting the pump, make sure that:

The voltage and frequency specified on the pump's nameplate coincide with those of the available power supply.

There are no signs of damage to the pump or its power cord.

The electric connection is made in a dry place, protected against any risk of flooding.

The electric system is complete with a residual current circuit-breaker (I Δn ≤ 30 mA) and an efficient earthing connection.

Any extension cords must comply with the requirements of the DIN VDE standard 0620.

Recommendations

To ensure the proper operation of the pump, it is important to comply with the following recommendations:

The pump must only be used when it is immersed in water.

The pump must be placed in a stable position inside a trap or in the lowest part of the place where it is installed.

Periodically, it is advisable to make sure that no dirt (leaves, sand, etc.) has accumulated in the collection trap.

Maintenance

It is absolutely essential to prevent any risk of the pump freezing. In the event of freezing temperatures, remove the pump from the liquid, empty it and keep it in a place where it cannot freeze.

The pump must be disconnected from the mains power supply before any cleaning operation is performed. The pump is maintenance free.

Disposal

This product or its parts must be disposed of in accordance with the laws regarding the environment; Use the local, public or private, refuse collection services.

Guarantee

Any material or manufacturing defects will be corrected during the guarantee period established by current law in the country where the product is purchased. It is up to the manufacturer to decide whether to repair or replace any faulty parts.

The manufacturer's guarantee covers all substantial defects attributable to manufacturing or material defects, providing the product has been used correctly and in compliance with the instructions.

The guarantee becomes null and void in the event of the following: - unauthorized attempts to repair the appliance;

- unauthorized technical changes to the appliance;
- use of non-original spare parts; manhandling;
- inappropriate use, e.g. for industrial purposes.

The guarantee does not cover:

- parts liable to rapid wear and tear.

For any action under guarantee, contact an authorized customer support service, presenting your receipt for the purchase of the product.

Direct Pumps and Tanks Ltd
Unit 12 Cossall Industrial Estate
Ilkeston
Derbyshire
DE7 5UA
Tel: 0115 9444474
Email: info@dpandt.co.uk