



PC1685 Pump Station

System Specifications & Installation Instructions



WATERFLOW PC1685 PUMP STATION

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Compliance Requirements

All Waterflow Pump Stations meet the requirements of the NZ Building Code G13-VM4.

Section 9 of AS/NZS 1546.1:2008 state that tanks constructed to these Standards will meet the requirements of the Code for Clauses B1 and B2, structure and durability.

Please feel free to ask for a copy of this complete document, if required.

Dose Chamber Specifications

Tanks are made of Cotene 9050 which is a linear medium density polyethylene, designed specifically for rotational molding of large tanks and products that require a high level of rigidity. It contains a fully formulated long term UV stabilization package (with a minimum UV8 rating) and is suitable material for wastewater treatment containment meeting all the requirements of Section 4.3.3 of AS/NZS 1547:2012 which cross references the structural performance requirements of its section 2.4.2.3 back to the relevant provisions of AS/NZS 1546.1, which for plastic septic tanks constructed via by rotational molding using thermoplastics (polyethylene) are set out in Section 9 of that Standard. These tanks have an expected lifespan of 50 years

Dose Chamber

1600ltrs Nominal capacity

1200mm Diameter over main body

732mm Riser Diameter

2125mm O/A height

Installation Location and Certification

These tanks are not designed for vehicle loads and shall be located no closer than 1.50m to a driveway, road frontage or a building. If for any reason the tank is located where vehicle traffic may drive over the tank or approach closer than 1.50m, or where it may be trampled on by farm stock then the tank should be protected by a concrete slab designed to support these loads. Surface water must also be diverted from flowing into the installation.

Installation must be certified to AS/NZS 1547:2012, the certificate to be issued and held by the regulatory authority.

High Water Table Installations

All tanks have been engineered and designed with support ribbing for maximum strength, in accordance with the NZC 3604. Clauses B1 and B2 for structure and durability, to withstand any hydraulic pressures, both lateral and uplift, created by high water table conditions, even when the tanks are completely empty at install stage.

As per the Waterflow installation instructions, in these conditions, tanks must be anchored in with concrete around base, as per the installation instructions, to height as specified.

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Plumbing Pipes and Fittings

All internal plumbing is done with PVC pipes with appropriate connections according to AS/NZS 1260 and AS/NZS 4130.

Backfill and Bedding

Place and bed to NZBC G13/AS2, using compacted granular metal, in layers not exceeding 100mm.

Electrical

Where a pump is required on a flat site electrical connection must be installed according to AS/NZS 3000 and the control and alarm system must be in a weatherproof housing located in a readily visible position.

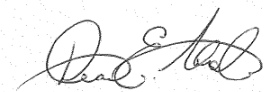
Warranty

WATERFLOW NZ LTD warrants that the NaturalFlow System will be free from defects in material and workmanship for the following periods of time from the date of installation as set out in the following conditions:

1. Roto-Molded tanks 15yrs
2. Dosing float/and or pumps 2yrs
3. WATERFLOW NZ LTD will at its discretion replace or repair such components that prove to be faulty with the same or equivalent part at no charge.
4. Warranty of operation covers the performance of the NaturalFlow systems as connected to the inflow for which they are designed, and also installed to the criteria as set out in the relative installation instructions and procedures.

Warranty excludes defects due to:

- A) Failure to use the system in accordance with owner's manual.
- B) A force majeure event outside the reasonable control of WATERFLOW NZ LTD such as (but not limited to) earthquake, fire, flood soil subsidence ground water table variations or plumbing fault.
- C) Modifications to surrounding landscape contours after installation
- D) The actions of a third party
- E) The system required to bear loads (either hydraulic or biological) greater than that for which it was designed
- F) Any modifications or repairs undertaken without the consent of WATERFLOW NZ LTD
- G) Failure, where applicable, to fence and plant land application system (disposal field)



1st June 2014

Dean Hoyle

Managing Director

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The PC1685 Pump Station is to be installed or signed off by a registered Drain layer to the design specified by Waterflow NZ Ltd.

The following installation instructions and procedures followed correctly will ensure System performance is not compromised in any way.

1. Excavate a 1.4m (wide) x 1.4m (long) level platform for the PC1685 at the appropriate depth, so when it is placed there is adequate fall to inlet from its source.
2. Lay 100mm of bedding metal on platform and place the PC1685
3. Inlet to tank can be set at any height desired, the penetration is sealed using a UNISEAL® (as per Appendix B)
4. Where possible excavate a trench away from System and lay drain coil and drainage metal at the base of the system to drain away any surface or ground water. On a flat or high water table site System must be bedded in as per appendix A below
5. Take a minimum of 3 photos at this point to showing connections and back fill, to ensure correct installation for sign off.
6. Back fill around tanks with pea-metal or similar. DO NOT back fill with soil or clay of any type as this can cause point pressure on the modules, through expansion and contraction, and will cause distortion.
7. Connect pump with fittings supplied and lay feed line.

Caution: System must be protected from excessive super imposed loads both lateral and top loads. E.g. loads from vehicular traffic. There needs to be at least 2m of clearance maintained around system.

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Appendix A and B

Appendix A

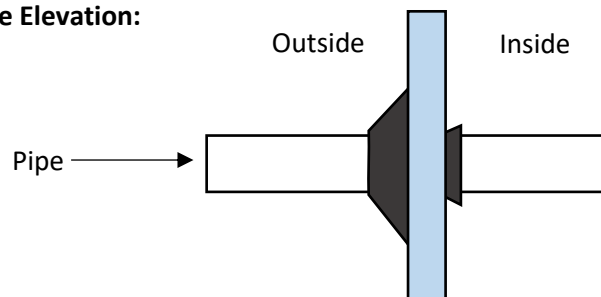
High Water Table: For installation in high water table areas, make sure you have a pump to pump away ground water whilst installing. Excavate a pump cavity to one side of the platform and pump ground water away during entire installation process. Half fill chamber with water, this will help with resisting the hydraulic uplift. Either lay 1-2m³ of concrete around the base of the tanks or mix 3 bags of cement/cube of GAP20 (or similar) metal to form a mass to stop any hydraulic uplift. Leave water in tanks for at least 12 hours after installation is completed.

Appendix B

Instructions for fitting UNISEAL®

1. Cut hole to the hole-saw size indicated for the UNISEAL® you are using. Either 127mm hole for a 4"/100mm pipe or 67.2mm hole for a 2"/50mm pipe.
2. Ensure that the hole is clean cut with sharp edges. Irregularities could cause poor seating and ultimate leakage.
3. Insert the UNISEAL® into the hole with the wide side facing the pipe to be inserted.
4. Make certain that the pipe end to be inserted is clean cut. File the edges so that there are no sharp points to cut UNISEAL®.
5. Using Detergent, lubricate the outside of the pipe end to be inserted, then push the pipe through the UNISEAL® from the large flange side. The detergent will be squeezed off as the pipe passes through the UNISEAL®. The co-efficient of friction of the rubber holds the pipe tightly in place.

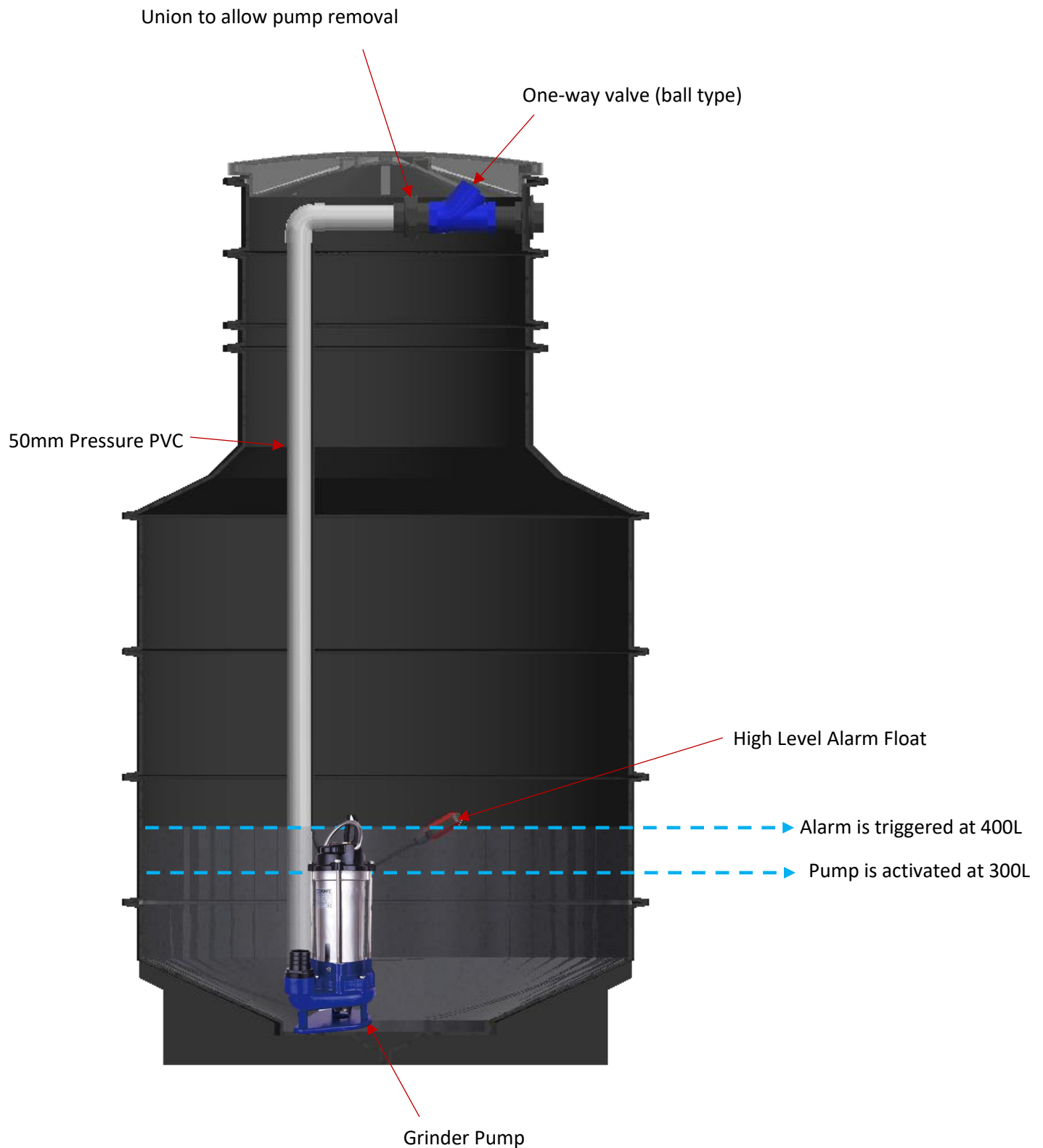
Side Elevation:



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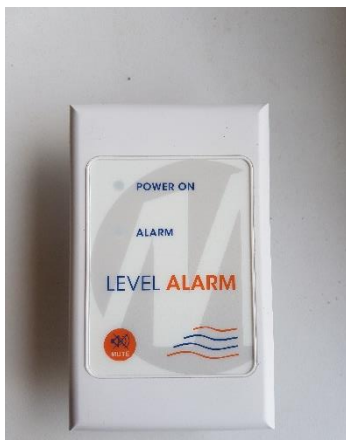
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Electrical Connection

A 240V power socket will be required at the system, this is mounted on a 100x100 post in the vicinity of the tanks.



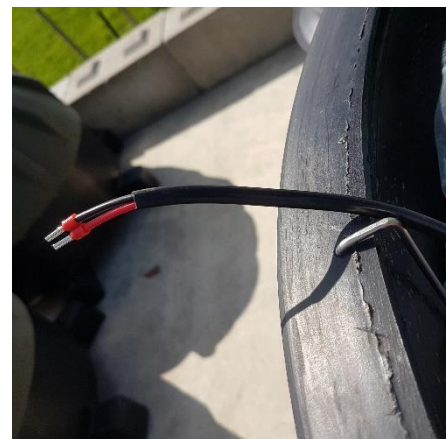
A low voltage cable will need to be run back to the high level alarm in the house from the pump chamber. The high level alarm controller is the size of a standard light switch and fits a flush box, this can be mounted wherever the customer wants it in the house, most commonly in the garage. This alarm controller will be found in a bag inside the pump chamber, which also has the float switch mounted. The float switch has two cables ready for connection to a low voltage data cable.



High Level Alarm Controller



Location inside tank



Connections for High Level Alarm

IMPORTANT: When installing the alarm panel in the house, ensure it is on a separate circuit to the pump.

NOTE: If the alarm sounds as soon as it is connected up, there is a switch on the reverse side of the panel with a number 1 by it, this will need switching over. It alters whether the float triggers when it is up or down, it should only trigger when the float is up.

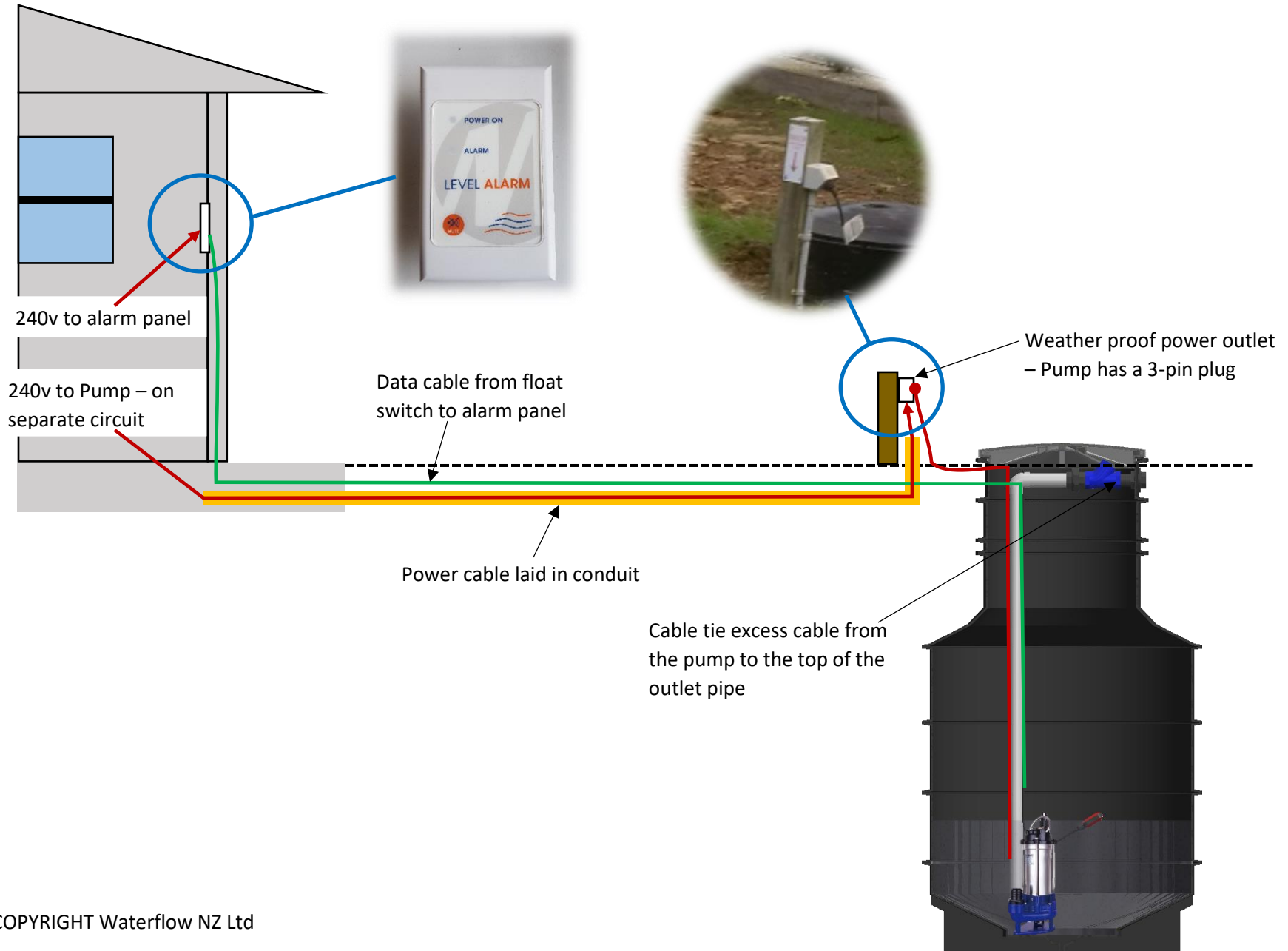


Reverse side of panel

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Electrical Diagram





For Anything Water...

Call us today to discuss your needs

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