

Project Review:

All Fibreglass Pumping Station For Residential Wastewater

Date Manufactured: August 2005

Review Date: Sept 2005



Manufactured and Fitted Out

An all fibreglass pumping station was manufactured and fitted out by Armatec Environmental Ltd and Trimate Industries Ltd. The pumping station featured here is 1830mm diameter and 6000mm deep, and is designed for a water table at ground level. The pumping station is complete ready to lower directly into the ground, backfill and connect; thus minimising on-site work for the authority and the contractor. This all fibreglass pumping station was chosen for the following reasons:

- **Corrosion Proof:** The high quality isophthalic polyester resin used is ideal for handling residential wastewater, and resists hydrogen sulphide gases.
- **Leak Proof & Infiltration Proof:** All fibreglass joints were factory sealed from both the inside and outside. The nozzles were factory custom fitted to be completely water tight.
- **High Performance Flygt Top Base:** A specially contoured Flygt Top Bases was fitted to minimise wastewater retention, maximise pump performance, be easy to clean and minimise any odour generation.
- **Strong & Light Weight:** The fibreglass was designed using finite element analysis and sandwich construction to resist crushing from external hydraulic forces, yet it remained light in weight so that it could be transported and handled easily in one piece.
- **Faster Installation:** Site installation time was minimised as all the assembly and fitout had been done in factory. All that was left to do below grade was to drop the unit in the ground, pour concrete around the base, and then backfill. The difficulties of confined space work were eliminated as no further work was required inside the pump station.
- **Economical:** While each site is different, the overall cost of an all fibreglass pumping station can be the same cost as a standard concrete pumping station, or it can be as low as 75% of the cost. These analyses are based on including all costs to complete the pumping station including installation and by-pass pumping if required. For this pump station the costs were estimated as being very similar.
- **Flygt Features:** The fibreglass pumping station was specifically designed for use with Flygt pumps and the advanced control features that are available from Trimate Industries.

For further information or enquiries please contact Trimate Industries Ltd, Auckland (phone 09-4158687) or Armatec.



The all fibreglass pumping station at various stages of manufacture, assembly and fitout. Photos from top: (1) laying up the specially contoured Flygt Top Base, (2) assembling the pumping station in factory, (3) fitting out with guide rails and discharge pipes, and (4) loading out for delivery to site.

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