

## Case Study –Narrow boat operator

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### Design Information

The Narrow boat operator is based near Wolverhampton and offers a range of services to Narrow Boat users during the Boating season which includes emptying of the waste water from boats.

After a trial of a Maxi Diaphragm Pump they decided that they required more flow as they were not able to reach the capacity required. They agreed to a Major Diaphragm Pump with the following specifications

- Flow rate: 2.9l/s Max
- Pipe diameter: 80mm
- Medium: Waste Water
- Running time: up to 12 hours per day

### Order

The order was given at the beginning of October 2006 and delivery of the pump was at the end of the month.

### Pump specifications

Major Diaphragm Pump c/w Mallard Bullfrog Valves 1.1kW 62rpm

### Whole life costs

#### Energy Use

If pump is running 12 hours/day = 4380 hours/year

Assuming energy costs of 10p/kWhr, 1 pump costs 11p/hour to run

Running cost per year per pump = £481.80

#### Spares

The customers direct spend with us over the last 10 years is the equivalent of 2 off Major Diaphragms and 2 off Mallard Bullfrog Valves totalling £880.00 (£88.00/year)