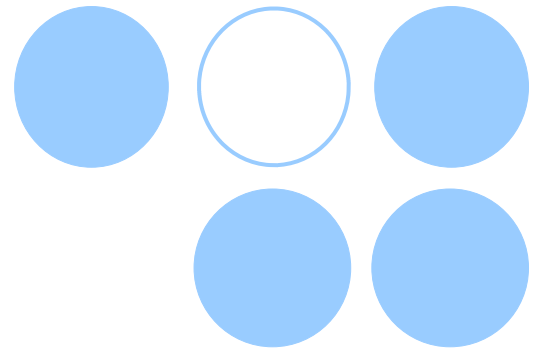


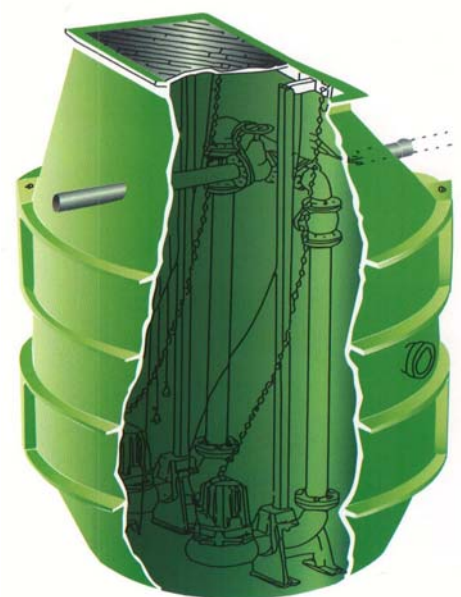
# Pumping Stations



*If you are close to the main sewer the TKS EnviroCare Prestige Range of packaged pumping stations provide an efficient and cost effective means of connection.*

## Benefits and Design

- Each system is custom designed to suit your particular requirements
- Flexible range of pump and chamber combinations to suit all applications
- Low maintenance requirements
- Outstanding value for money
- Choice of concrete, GRP or plastic chambers
- High quality pumps specifically selected from leading manufacturers
- Low running costs
- Robust concrete chambers reduce need for concrete backfill
- Compact design does not require large plant for excavation or handling
- No odours or noise nuisance
- Low visual impact - cover flush with ground
- Reliable operation - simple design, high quality components
- Easy installation
- The next best thing to gravity connection to the main sewer



TKS EnviroCare

## Why use a Pumping Station?

The Prestige Foul Water Pumping Station Range is designed to pump the raw effluent that is discharged from homes or business premises. They use two high-quality submersible sewage pumps, operating on a duty/standby basis via a local control panel.

Its cylindrical shape and concrete construction make it exceptionally strong. All Prestige foul water pumping stations are constructed from the highest quality components, including the use of stainless steel fittings throughout.

### Chamber Design

The pumping station chambers are engineered to high standards and manufactured in either durable GRP or concrete ring sections. All connections, both inlet and outlet, and tank capacities can be adapted to suit individual site requirements.

If you select a system that is constructed from concrete ring sections, most of the assembly is carried out on site as part of the installation. Because of this the system design is much more flexible and the finished product precisely matches your unique project requirements. When specifying a GRP chamber the package comes pre-assembled, enabling it to be delivered to your site ready to be installed in a prepared excavation. It is then a simple matter to fit the pumps into the chamber and to mount the control panel into its housing before commissioning.

All of our packaged pumping stations are supplied with controls which enable fully automatic operation. Most models are also equipped with a high level alarm.

### Pump Selection

We use a wide range of submersible pumps, predominantly from the ITT Lowara, KSB and Flygt ranges – all are well known for quality. These include macerator, grinder, solids handling and clean water pumps. A full range of flow and

discharge head characteristics allow you to specify the control of discharges from most sites.

### Installation

Pumping stations can be incorporated into the design of any private sewage treatment plant. This can be particularly helpful when drainage inverts are deep or when it is necessary to control fluctuating loads.



*Trenchless Installation of the pumped rising main*

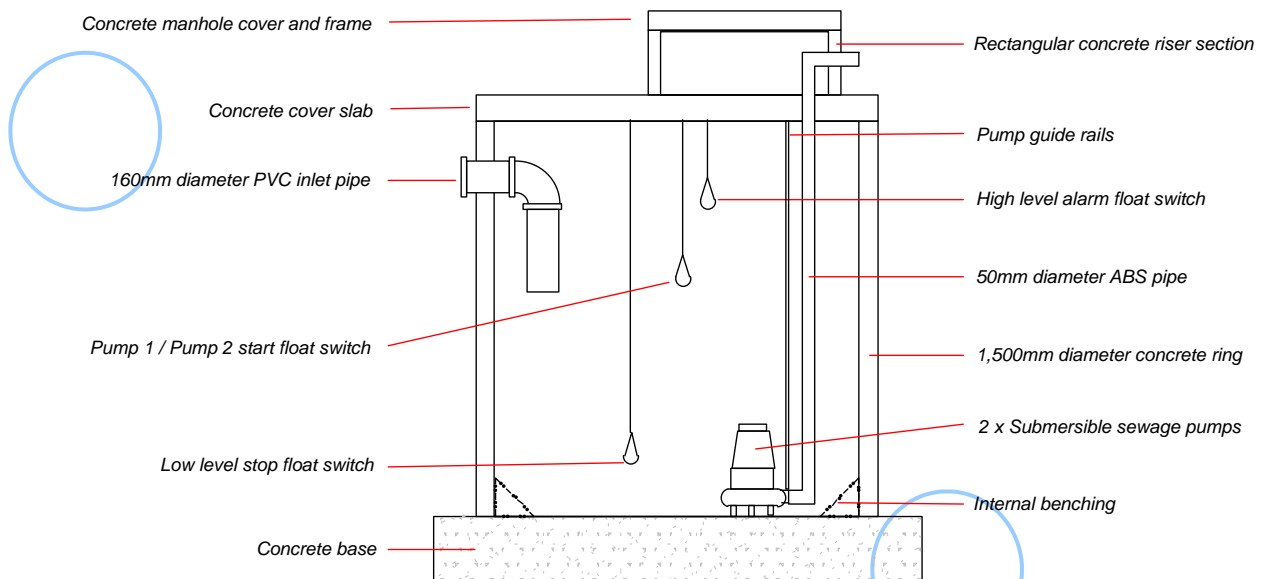
TKS EnviroCare provide a full supply and installation service for pumping stations and rising mains. This service includes liaising with local authorities and public and private utility companies to obtain the relevant permissions and licences. Where possible we will use the latest trenchless technology to lay the rising main in the highway to reduce costs and minimise disturbance.

## How a Pumping Station Works

The incoming sewage is held in the sump of the pumping chamber. When it reaches a predetermined level it triggers a float switch, which in turn activates one of the pumps. The pump keeps running until the level drops below the 'stop' float switch. This sequence continues with each of the pumps operating alternately to ensure even wear and tear.

In the unlikely event that one of the pumps develops a fault then an alarm is triggered and the second pump operates to ensure that system doesn't stop running. If for any reason the water level within the chamber reaches the 'high level alarm' float, then both pumps are put into operation and the alarm is triggered. Once the water level drops sufficiently the alarm will turn off.

# Pumping Station Layout



## Pumping Chamber

The chamber is generally constructed using 1,200mm diameter concrete rings to a depth of 1,450mm below the incoming drain. However, larger chamber sizes can be specified. We can also supply pre-assembled GRP or plastic chambers upon request.

## Pumps

We usually select two submersible sewage pumps from the extensive KSB ICS range. The pumps are mounted on guide rails for fast and easy removal.

Pumps from most of the major manufacturers can also be specified, including ITT Lowara, Flygt and ABS. All types of waste can be accommodated from surface water to raw sewage.

## Internal Pipework

The majority of pipe work and fittings are made from 50mm diameter ABS, which is connected to the discharge pipe via a MDPE to ABS adaptor. The 2" ball-type non-return valves are manufactured from cast iron. All stations incorporate an isolation valve on the discharge pipe to facilitate easy future maintenance.

## Level Control

KSB ICS range of pumps feature an integral level control system that automatically calibrates itself for single or twin pump configuration.

Alternatively we can install three or four high-quality sewage grade float control switches. The lowest of the switches stops the pumps running to protect them from running dry. The middle two floats initiate the start of each pump cycle. The highest of the floats triggers the high level alarm and activates both pumps.

## Control Panel

The KSB ICS system does not require a control panel, but can be specified with a Status Display Module.

All other twin pump systems feature a standard duty/standby control panel with a built in high-level alarm facility. It features a main isolator, which is mounted on the door along with status indicator lights and hand/off/auto switches for each pump.

## Electrical Requirement

All systems can be specified with either a single or three-phase power supply.

## Service & Maintenance

Once your system is operational and people are depending upon it every day, it is vital to ensure that it is serviced regularly and professionally. TKS EnviroCare offer a full range of Service Agreements to suit your requirements and to ensure that your system maintains its efficiency.



Caring for your environment

TKS EnviroCare Limited has a policy of continual product development and the above information may be subject to change without notice

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