The PumpMatic Range
Below Ground packaged pumping Stations

- Ideal for -
- Sewage, Wastewater, Stormwater

Pump Technology Ltd, manufactures its own pumping station tanks. We have complete control over the construction, quality and on-time delivery of your pumping station; we will provide you with a site specific pumping station.

For all your below ground pumping needs- Basements, single or multiple houses, commercial properties such as Schools, shops, restaurants, factories etc. Pump Technology Ltd, have a below ground pumping station for you.

Call our in-house consultant for a detailed technical and commercial specification.

01189 821 555 - www.pumptechnology.co.uk
Custom below ground sewage stations for every application -

- **Types** - Private, Type 1 and Type 2 adopted pumping stations.
- **Chambers** - GRP construction, standard, bespoke, vertical and horizontal.
- **Pumps** - Leading manufactures brands, free flow vortex or grinder and explosion proof options.
- **Connections** - Single or multiple inlets, height & position to suit site layout, UPVC or MDPE discharge connections.
- **Options** - Single or duplex pumps, free standing, guiderail mounted, UPVC, ductile iron or galvanised internal pipework.
- **Covers** - Double sealed, lockable, light duty or heavy duty.
- **Controls** - Panels, alarms, telemetry systems, kiosks.
- **Support** - Onsite advise, in-house consultant.
- **Service** - A National service engineer network - Commissioning, maintenance and breakdown.
PumpMatic Range

PUMPMATIC 75/750
Packaged Sewage Pumping System (single pump)

Inlet
Cable Duct
Swing Check Valve
Quick Release Coupling
400 mm Invert
711
600 mm Discharge

Vent Pipe If Required (supplied capped)

Access Frame & Cover with Clear Opening of 450mm x 600mm
5 tonne GLVW supplied

NOTE:
Inlets can be located to customer requirements!

Tank INVERT & DISCHARGE are set at a STANDARD HEIGHT
Discuss any variations BEFORE ORDERING
Discharge pipework must be UPVC Class ‘C’ or ‘D’
Solvent weld or MDPE pipe black as shown

FOR INFORMATION ONLY
PUMP MAY DIFFER FROM ONE ILLUSTRATED

PUMP SELECTED TO MEET CUSTOMER REQUIREMENTS

38 tonne, double sealed, lockable, recessed covers available.

Due to a policy of continuous product improvement we reserve the right to alter specifications without notice.
PUMPOMATIC 100
Packaged Sewage Pumping System

Access Frame & Cover with Clear Opening of 450mm x 600mm
5 tonne GLVW

Lifting Chain on Retaining Hook
Swing Check Valve

38 tonne, double sealed, lockable, recessed covers available.

Discharge
Quick Release Coupling
Flexible Hose
GRP Housing

Submersible Pump

110 mm dia Inlet
1.5" dia Cable Duct

1250 mm
1000 mm
500 mm minimum

NOTE:
Inlets can be located to customer requirements!

FOR INFORMATION ONLY
PUMP MAY DIFFER FROM ONE ILLUSTRATED

Extra Connection fitted for Vent Pipe

PUMP SELECTED TO MEET CUSTOMER REQUIREMENTS

Tank INVERT & DISCHARGE are set at a STANDARD HEIGHT
Discuss any variations BEFORE ORDERING
Discharge pipework must be UPVC Class ‘C’ or ‘D’
Solvent weld or MDPE pipe black

View with Access Cover removed
(Float switch & lifting chain not shown)

Due to a policy of continuous product improvement we reserve the right to alter specifications without notice.
PUMPOMATIC 125
Packaged Sewage Pumping System

SECTION A-A

Due to a policy of continuous product improvement we reserve the right to alter specifications without notice.

PUMP SELECTED TO MEET CUSTOMER REQUIREMENTS

FOR INFORMATION ONLY PUMP MAY DIFFER FROM ONE ILLUSTRATED

PUMP SELECTED TO MEET CUSTOMER REQUIREMENTS

SECTIONAL PLAN OF GRP TANK

NOTE:
Inlets can be located to customer requirements!

Due to a policy of continuous product improvement we reserve the right to alter specifications without notice.
PUMPOMATIC 200
Packaged Sewage Pumping System

SECTION A-A

Access Frame & Cover with Clear Opening of 600 x 600 5 Tonne GLVW

38 tonne, double sealed, lockable, recessed covers available.

Tank INVERT & DISCHARGE are set at a STANDARD HEIGHT
Discuss any variations BEFORE ORDERING
Discharge pipework must be UPVC Class ‘C’ or ‘D’ Solvent weld or MDPE pipe black as shown

NOTE:
Inlets can be located to customer requirements!

Due to a policy of continuous product improvement we reserve the right to alter specifications without notice.
PUMPOMATIC 300
Packaged Sewage Pumping System

SECTION A-A

NOTE:
Inlets can be located to customer requirements!

Ground Level

1300 mm

635 mm

Inlet Size as required

Access Frame & Cover with Clear Opening of 1000 x 775
5 Tonne GLVW
38 tonne, double sealed, lockable, recessed covers available.

Discharge Spigot

Level Control Floats

Submersible Sewage Pumps

Pumps on Self Locating Quick Release couplings

38 tonne, double sealed, lockable, recessed covers available.

Due to a policy of continuous product improvement we reserve the right to alter specifications without notice.

For further PumpMatic Tank Sizes and Pump Options call our in house consultant for a detailed technical and commercial specification
EXAMPLE OF A DUAL PUMP CONTROL PANEL OPERATION

**SYSTEM OPERATION**

The system controls the level into the storage tank automatically via the non-mercury operated float switches.

- **Assist Start Float** is set to the level at which the second pump is required to start.
- **High Level Float** is set to the level at which the alarm is required to give warnings of potential flood conditions. This should be set at the level of the INLET to maximise the tank capacity.
- **Duty Start Float** is set to the level at which the first pump is required to start.
- **Stop Float** is set to the level at which the pumps are required to stop. This must be set above the volute of the pump.

**DUAL PUMP CONTROL PANEL**

The panel allows for manual run and test of the pumps and also automatic operation, giving a changeover of duty after each cycle, to give even pump wear.

The control voltage is kept low by the use of an isolating transformer giving 24V AC to the remote non-mercury switches and door mounted instruments.

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>LAMP COLOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Pump 1 Running</td>
<td>Green</td>
</tr>
<tr>
<td>B Pump 1 Tripped</td>
<td>Red</td>
</tr>
<tr>
<td>C Control Healthy</td>
<td>White</td>
</tr>
<tr>
<td>D Pump 2 Running</td>
<td>Green</td>
</tr>
<tr>
<td>E Pump 2 Tripped</td>
<td>Red</td>
</tr>
<tr>
<td>F Pump1: hand-off-auto</td>
<td>Red</td>
</tr>
<tr>
<td>G High Level</td>
<td>Red</td>
</tr>
<tr>
<td>H Pump2: hand-off-auto</td>
<td>Red</td>
</tr>
<tr>
<td>J Cancel Alarm</td>
<td></td>
</tr>
<tr>
<td>K Audible Alarm</td>
<td></td>
</tr>
<tr>
<td>L Isolator: On-Off</td>
<td></td>
</tr>
</tbody>
</table>
As with all site work the dangers of working with water and electricity pose severe threats to health if obvious and fundamental precautions are not taken. Therefore if you are in any doubt to any of the following, please do not hesitate to contact us.

All site work should be undertaken by qualified personnel only.

**Lifting & Storage**
Great care should be taken when lifting & handling the chambers and suitable equipment should be used at all times. The nature of the design means the centre of gravity of the chamber is likely to be offset. The chambers are best lifted by crane using webbing lifting straps. Any “lifting eyes” provided are untested & should not be used as the sole lifting point for the chamber. Any storage site should be free of any object which may cause damage to the chamber and the chamber should be secured to prevent any rolling.

**Pre-Installation Inspection**
Before installation an inspection of the chamber must be carried out to ensure no damage has occurred since delivery and to check all inlet and outlet connections are correct. Any changes or repairs cannot be made once installation has begun.

**Tank Installation**
- Select a suitable location for the tank. This will be normally at ground level lower than the properties being drained and allow for the falls in site drainage.
- Check that no other structure or special access is required over the selected spot. Provision can always be made, if necessary, to place the tank in a roadway, provided that a suitable protective backfill is placed around it and a suitable heavy-duty manhole cover is used over the opening.
- Check that no underground cable, pipe or service duct, lies underneath.
- Excavate the minimum opening in the ground to receive the pump chamber and pipework to be used. The depth of excavation needs to be at most, 500mm deeper than the overall tank depth. A sump should be left in one corner for dewatering purposes.
- A dewatering pump MUST be used to remove any ground water present & provide a dry excavation until the concrete backfill is set.
- Some clean hardcore should be placed and consolidated in the base of the excavation. Usually this will need to be around 200mm thick, but in good ground, should be a minimum of 50mm.
- In order to be protected from any external force the chamber should be completely surrounded by concrete. The concrete surrounding the chamber should be of suitable thickness, usually a minimum of 150mm, and quality to protect the chamber from all external pressure. Whether this is ground pressure, ground water pressure, trafficked areas or any other force which may cause damage or de-formation to the chamber. Therefore we recommend a qualified civil/structural engineer is consulted to specify the correct concrete backfill suitable for your specific site requirements.
- Pour the appropriate amount of concrete on top of the hardcore and then lower the chamber onto the damp concrete allowing the base flange, if fitted, to settle in, ensuring that the inlet and outlet pipes are correctly aligned.
- Fill the chamber with clean water to depth of approx 500mm and recheck levels. **Do not overfill as the chamber is not designed to hold water when not supported by the concrete backfill.**
- Carefully commence pouring of the concrete backfill in **small stages** evenly around the chamber ensuring there are no voids which may allow ground water to penetrate. **Vibrating pokers should be used with care to avoid damage to the chamber.**
- Continue filling the chamber with clean water whist evenly backfilling, ensuring the water level is no more than 300mm above the level of the concrete backfill.
- Connect up the site pipework to the inlet and outlet of the pumpwell, and draw the pump and float cables through the conduit to the control panel before they are encased in concrete.
- **Under no circumstances should concrete be poured directly onto the chamber. Attempting to pour too much concrete at once will result in the chamber “floating” or particularly above the half way point damage to the chamber due to excessive weight on the chamber body for which the manufacturers will not be responsible.**
Finish off the surface of the concrete at the required level, depending on the final ground cover required i.e. topsoil, tarmac, gravel etc. (see sketch below). If the access cover or the surrounding area is likely to be subject to other than purely pedestrian traffic, provision must be made to ensure that no weight loading is taken by the chamber i.e. by the construction of a cover slab, and the appropriately specified access cover must be used.

IMPORTANT NOTES
THE CONCRETE BACKFILL IS DESIGNED TO PROTECT THE CHAMBER FROM EXTERNAL GROUND & GROUND WATER PRESSURE. THEREFORE IT SHOULD BE WATERTIGHT. WE CANNOT ACCEPT RESPONSIBILITY FOR DAMAGE OR DE-FORMATION OF THE CHAMBER OR PIPEWORK CAUSED BY EXTERNAL GROUND OR WATER PRESSURE OR GROUND MOVEMENT DURING OR AFTER INSTALLATION.

ADDITIONAL NOTES
A cable duct is required with no sharp bends.
It is most important that once the tank is in situ with all the inlet connections made, the drainage system should be flushed out, and all sand, debris etc. removed from the chamber.

If vehicular traffic will be passing over the chamber, it is ESSENTIAL that the cover slab is constructed so that there is NO DIRECT LOAD on the chamber. Also an access cover with the correct specified S.M.W.L. must be used.

ELECTRICAL INSTALLATION
Wiring diagrams are enclosed with each control panel. Please adhere to the diagram supplied.

If any further information is required please consult your supplier.

WE RECOMMEND THAT ONCE THE SYSTEM HAS BEEN COMPLETELY INSTALLED, OUR ENGINEER ATTEND THE SITE TO COMMISSION THE SYSTEM.

By beginning installation of the unit the installer is deemed to have read and complied with the above. Failure to do so will invalidate your warranty. If you have any questions please remember we are only a telephone call away.
Other Products - Sewage pumping systems

- **FlushMaster**: Domestic / light commercial behind toilet pumping system
- **EffluMaxi**: Commercial floor mounted sewage pumping system
- **DrainMajor**: Domestic / commercial floor mounted wastewater pumping system

Pump Technology Ltd and its Pumping Partners offer nationally:

- The best pump selection for each specific commercial requirement
- Full Installation & commissioning support
- Maintenance & repair contracts nationally
- CPD’s / Product reviews / training