



Flygt Packaged Pumping Stations

A comprehensive range of products to suit many applications

Flygt Packaged Pumping Stations

As we build in more remote and inaccessible areas, the need to pump wastewater to treatment works becomes a key consideration at the planning stage, particularly with developments situated below the gravity sewer, or a considerable distance away.

As such, the traditional solution has been to build a pumping station consisting of a chamber constructed with concrete rings and fitted out with pipes, valves and pumping equipment to move the wastewater to the gravity main. This type of construction is labour intensive, time consuming and requires considerable co-ordination on-site.

So, is there an alternative solution?

The simple answer is yes! Prefabricated Packaged Pumping Stations, fully kitted out with pump(s), valves and pipe work, can be delivered to site and simply placed in the ground.

As the market leader in submersible pumps, Flygt has developed a comprehensive range of Packaged Pumping Stations (PPS) that are suitable for single dwellings through to large multi-purpose applications.

In developing our product range we have taken into consideration the different demands an application may exert on a product and created a unique and versatile range.

Sewers for Adoption Legislation and Adoptable Pumping Stations

'Sewers for Adoption' (SFA) was first introduced by the Government in 1981. The legislation sets out guidelines to ensure that developers build pumping stations that are compliant with the specifications agreed by the local Water Company, to allow them to be 'adopted' at a later date.

These guidelines also mean that many pumping stations requiring full replacement or refurbishment will also have to meet the standards set out by the local Water Company.

In designing our range of Packaged Pumping Stations, Flygt has worked closely with a number of Water Companies to create a product that is suitable for adoption. Working to the standards specified by an individual Water Company, we can design and deliver a PPS that not only conforms to the standards required for pipework, valve layout, pump types, level and control specifications but also benefits from the Flygt patented design and quality assurance.

For further information see page 4 TOPS Series.



Quick selection guide and range overview

Flygt Packaged Pumping Stations use a simple, minimal design concept that is ideal for civil works where there is a need to reduce labour intensive tasks and a quick installation is required.

Our stations are prefabricated and available in a range of designs and sizes, all supplied complete with the necessary materials and equipment to allow ease and speed of installation and commissioning.

Flygt Packaged Pumping Stations can be adapted to suit most individual requirements. Applications include domestic wastewater for a single household, through to large housing developments, effluent and wastewater from industrial units and commercial premises. Indeed, in any situation where wastewater needs to be pumped to a mains connection or where you need to upgrade existing arrangements, Flygt has a solution.

TOPS Series

- For sewage, effluent and stormwater applications
- Incorporates the patented self-cleaning TOPS benching unit which reduces accumulation of solids in the sump of the chamber, ensuring the pumps do not get clogged
- Reduced servicing and unplanned maintenance
- The TOPS pumping station can be fully adoptable under the 'Sewers for Adoption' (SFA) standards
(See page 4)

Micro Series

- For domestic wastewater and sewage from individual households
- Suitable for installation above or below ground
(See page 6)

Compit Pumping Station

- Single or dual pump configuration
- Applications include small housing developments, toilet blocks and commercial extensions
(See page 8)

	TOPS 80	TOPS 100	TOPS 150	Micro 3	Micro 4	Micro 5	Micro 5G	Micro 6+6	Micro 7	Micro 7G	Micro 10	Compit
Single Pump	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Twin Pump	✓	✓	✓					✓			✓	✓
Pump kW	1.3-4.4	1.3-7.4	1.5-22	0.25	0.25	0.55-1.1	0.55-1.1	0.75-2.4	0.75-2.4	0.75-2.4	1.5-2.4	1.5-2.4
Phase	1 or 3	1 or 3	1 or 3	1	1	1	1	1 or 3	1 or 3	1 or 3	1 or 3	1 or 3
Pipework ø	50-80 mm	50-100 mm	50-150 mm	1.25"	1.5"	1.5"/DN50	1.5"/DN50	DN50	DN50	DN50	DN50/DN65	DN50
Floor Mounted				✓	✓	✓		✓	✓		✓	
Below Ground	✓	✓	✓				✓	✓*		✓	✓	✓
Chamber Depth (approx)	2.1-4m	2.1-6m	2.4-6m	0.4m	0.6m	0.7m	1m	0.85m	0.7m	1m	2m	2m

The above are standard Flygt models. Bespoke designs are also available.

*Buried in a suitable structure

TOPS Series

Prefabricated TOPS pumping stations

The Flygt TOPS Packaged Pumping Station can be fully adoptable under the latest SFA guidelines, and has been approved by many of the Water Companies in the UK. The standard Flygt TOPS PPS comes in a range of sizes for depths between 2 and 6 metres, and capacities between 4 and 95 litres per second. Bespoke units with increased storage volumes are available on request. Incorporated is the patented TOPS benching unit which improves the flow over the sump floor during pumping. This increase in turbulence causes re-suspension of solids and entrainment of floating debris. The result is more solids being removed from the sump, leaving a minimum sludge accumulation in the sump which cuts the cost of service calls.

Delivered as a prefabricated kit, the TOPS Packaged Pumping Station is easy to install and time saving.

Quality construction

The Flygt TOPS Packaged Pumping Station tank is constructed from Glass Fibre Reinforced Polymer (GRP); a strong, lightweight material with superior resistance to corrosion, guaranteeing your pumping station a long life.

Combined with Flygt submersible pumps and accessories ensures the performance of the TOPS Packaged Pumping Station.

- All raw materials meet ISO 2797 and ISO 2559
- All stations are batch tested to BS EN 12050



Options

- Available with separate valve chamber and constructed in accordance to the requirements of SFA 7th edition
- Standard tank diameter from 1.2m to 2.5m
- Complete range of monitoring and control equipment available to meet SFA 7th edition requirements
- Wide range of pipework sizes and access covers
- Large variety of pump motor sizes and impeller combinations to suit all applications
- Bespoke sizes available on request

TOPS performance and cleaning

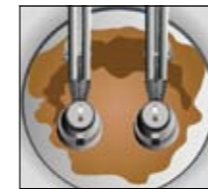
The TOPS sump, is a patented self-cleaning benching unit which is hydraulically optimised to increase turbulence during pumping. Originally cast from concrete, we have today incorporated the patented design into our GRP packaged pumping stations.

The TOPS design was extensively researched and tested by Flygt, which included such factors as floor clearances and spacing between adjacent pumps before the self-cleaning benching design or TOPS was finalised. Then, in a series of comparative performance tests, sumps with varying diameters and floor configurations were tested to gauge their ability, versus the TOPS design, to prevent sludge build-up and re-suspend solids.

The flat shape of a traditional pumping station sump floor, allows for the build up of sludge, requiring regular cleaning. This is time consuming and expensive and can present safety hazards to personnel. With the Flygt TOPS design, you can forget regular costly maintenance and expensive unplanned maintenance visits to remove solids.



A standard flat sump floor generates stagnant regions where solids build up.



Sludge and solids in the conventional sump have been deposited across the entire sump floor.



The TOPS sump design creates turbulence that re-suspends solids, dramatically improving solids transport.



Deposits in the TOPS sump showing the small amount of remaining solids.



Pumps

Flygt 3000 Series

Submersible wastewater/ sewage pumps, available with various impeller types and motor sizes.

Control panels

Compact (included as standard)

The Flygt Compact control panel is our basic model, with stop and start functions activated by floats or level switches. As with all our panels it comes prewired for connection to a telemetry unit which will inform the operator if there is a pump failure.

iCompact

The standard iCompact control panel includes the Flygt APP521 pump controller which can operate from level switches or an analogue level sensor. The APP521 offers a range of flexible control systems and is capable of providing logged data such as pump status, number of pump starts, pump run time, and local alarms. The iCompact can enable the site to be remotely connected to our Bureau or a SCADA system.



MICRO Series

Flygt Micro

The Flygt Micro Packaged Pumping Station is available in several sizes and is designed to move domestic wastewater from single households, extensions and basements to a mains sewer located at a higher level, or where gravity drainage is not possible. Other applications include ground water or run-off water from garage driveways.

The design of the Micro PPS allows for less sedimentation and better pumping performance and provides reliable operation.

Micro stations are made in polyethylene, a lightweight and strong material that makes them easy to handle and install.

Installation above or below ground

Within the range, three of the Micro designs are suitable for installation below ground offering excellent resistance to soil stress, reliable closure and no odour. These models are perfect for under driveways.

Six Micro designs can be surface mounted; the smallest unit is suitable for installation on the floor under a sink.

Micro 3,5 and 7

The Flygt Micro 3, 5 and 7 are designed for indoor installation, with the 5G and 7G specifically designed for below ground installation.

Sump volumes range from 80 to 250 litres, and all are designed according to EN 12050-1 and 2.



Pumps

Flygt Submersible Pumps

Submersible wastewater/ sewage pumps, available with various impeller types and motor sizes.

Control panels

eCompact

The Flygt eCompact control panel offers stop and start functions activated by floats or level switches.

Compact

The Flygt Compact control panel is our basic model, with stop and start functions activated by floats or level switches. As with all our panels it comes prewired for connection to a telemetry unit which will inform the operator if there is a pump failure.



Micro 10

The Flygt Micro 10 is the latest addition to the Micro range. It is available in two heights; 1.3m and 2m with storage capacities of 1200 and 1900 litres respectively. It is suitable for installation both above and below ground.

A variety of access covers are available, and the tank is fitted with guiderails.

Complete Range - Features and Benefits

- Easy to close lightweight cover with rubber seal for leakage and odour protection
- Pre-prepared inlet, outlet and power connections to facilitate simple installation
- Tank shape designed to prevent solids build-up
- Manufactured from rotationally moulded polyethylene giving high strength, and even tank wall thickness
- Lightweight, easy to handle and install
- Large variety of tank sizes and possible pump connections to adapt to all applications
- Less solids settling leading to better pump performance and reliable operation

Micro 6+6

The Micro 6+6 has all the design functionality of the Micro 6 range with the added feature that it has dual tank chambers.

It has been designed where an application requires back up wastewater storage and pumping due to irregular flow rates, and has a capacity of 550 litres.

The construction of the Micro 6+6 allows for installation either above or below ground, and can be supplied with external pipework and valves where required.



Compit Packaged Pumping Station



Flygt Compit

The Flygt Compit Packaged Pumping Station is designed for sewage, pressurised sewage systems and groundwater. As a mid-sized pumping station, the Compit is appropriate for use in small housing developments, toilet blocks and commercial extensions.

- The Compit is installed at a depth of 1.9m
- The bowl-shaped bottom and smooth inner surface of the pumping station act as benching to provide self cleaning during operation
- Designed to accommodate one or two pumps
- Recommended Flygt Pumps: 3057 or 3068 pump (either single or three phase options can be used dependant on the requirement)
- Stainless Steel discharge piping and lifting chains
- Includes non-return and gate valves as standard
- Flygt ENM 10 float switches included



Quick installation

The Compit PPS is complete on delivery for installation and immediate connection. Made from roto-moulded polyethylene, the Compit is easy to handle and weighs 181kg (excluding pump).

Slick Kits - for non-prefabricated pumping stations

Flygt Slick Kits

Flygt Slick Kits are specifically for pumping stations constructed on site using concrete rings. Each kit contains all necessary individual components to fit out the pumping station which include:

- Flygt Pump (3045 to 3153)
- Discharge Connections
- Pipework
- Flange adapters and fixings
- Valves
- Level Regulators
- Control Panel
- Alarm Beacon (optional)
- Kiosk (optional)
- Access Frame and Cover

Flygt Systems Engineers have designed a series of standard station designs, each fitted out with the parts included in the appropriate Slick Kit. By providing us with your technical specification we will provide you with detailed drawings* and itemised parts.

*at time of purchase

TOPS Benching Unit

For concrete pumping stations, we have available the Flygt TOPS Benching Unit, which contains the same patented TOPS sump design as found in our TOPS Packaged Pumping Station, and is constructed from GRP.



Pumps

Flygt 3000 Series

Submersible wastewater/ sewage pumps, available with various impeller types and motor sizes.

Control panels

eCompact

The Flygt eCompact control panel offers stop and start functions activated by floats or level switches.

Compact

The Flygt Compact control panel is our basic model, with stop and start functions activated by floats or level switches. As with all our panels it comes prewired for connection to a telemetry unit which will inform the operator if there is a pump failure.



Monitoring & Control

The same great knowledge and experience that builds the best pumps in the world lets us control and monitor your pumping station.

Pump and process controllers

Flygt offers a complete range of pre-configured pump and process controllers to suit all sizes of pumping stations, including those used in water and wastewater treatment plants. Exclusively designed for pumping applications, their standard features mean users can easily operate the entire range. All pump controllers have a user-friendly HMI (Human Machine Interface) front panel and can be connected to supervisory control systems.

General alarm and monitoring units

Also available from Flygt is a full range of ultra-low power, multifunctional data loggers with telemetry for remote monitoring. These can monitor, log and alert customers to a wide range of conditions and events, either locally or remotely - even where power and/or communication (PSTN) are not available (e.g. in a reservoir or a combined sewer overflow)

Starters

Flygt offers a wide range of IP rated starters to suit the various pump models.

Level/pump sensors

From float and pressure sensors to ultrasonics, we can provide the sensor you need to monitor the pump(s) in your pumping station.

Pump supervision

Monitoring relays can be provided to protect the pump during operation. This range is well adapted for the different models of pumps.

SCADA software systems

AquaView is software for the monitoring and control of entire pumping station systems data including pumped volume, inflow, water levels and other pump statistics is clearly viewed and easily accessible. AquaView also features a foreseeing alarm, to predict and avoid problems which could cause serious damage.

Inverters VFD/VSD - PumpSmart

PumpSmart is a concept that's been tailored for driving wastewater pumps efficiently and effectively. It combines industry standard VFD hardware with our specialist wastewater pump software. As pump experts, we know exactly what you need - so we preset almost 90% of the parameters that drive your pumps. With PumpSmart you can expect all the advantages of speed regulation, plus top pumping efficiency.

Pump Control Panels

Flygt has developed for the UK markets a comprehensive range of pump control panels, from the simplest type with basic start and stop functions to highly sophisticated, intelligent Smart panels using state-of-the-art monitoring and control systems. Here at Flygt we have the experience and knowledge to supply you with the right panel or monitoring & control technologies, to make your packaged pumping station function optimally.

The following table shows key features of our full range of control panels, from single pump 230V to dual pump 400V, with Direct OnLine (DOL) or Automatic Star Delta (ASD) starting. They can be supplied with level control (via ultrasonic level sensors or floats) and remote telemetry monitoring.

	Model	Features
Basic	eCompact	Single or Three phase Direct OnLine (DOL) Duty / Assist Single or Dual pump ENM 10 Level Regulators NF5 Float Switches
	Compact	Single or Three phase Direct OnLine (DOL) or Auto Star Delta (ASD) Single or Dual pump Duty / Standby or Assist ENM 10 Level Regulators NF5 Float Switches Volt Free connections for BMS / Telemetry
Standard	iCompact	Dual Pump Direct OnLine (DOL) or Auto Star Delta (ASD) ENM 10 Level Regulators Duty / Standby or Assist Analogue Pressure level input Sensorless flow meter (when used with analogue input) Volt Free connections for BMS / Telemetry Communication to SCADA SMS Text alarms
Advanced	Smart Compact	Three phase VFD Single / Dual pump Analogue Pressure level Analogue Ultrasonic level Communication to SCADA Volt Free connections for BMS / Telemetry

Commissioning, Aftermarket and Service

Commissioning

Flygt commissioning engineers are all approved by the NICEIC and offer a commissioning service for our full range of packaged pumping stations and related control equipment.

Our commissioning service not only ensures the correct electrical connection of pumps, floats and ancillaries, but we will ensure that your packaged pumping station is fully functional and optimised to your particular application upon completion.

Aftermarket and Service

Flygt is able to provide a fully comprehensive aftercare service, including 24/7 emergency breakdown attendance, preventative maintenance contracts, workshop repair and pumping station refurbishments.

It is the Flygt aim to provide customers with the highest possible level of care, starting with pre-sale and continuing throughout the entire lifetime of the product. Our strategically located service centres are supported by a mobile team, reacting quickly to call-outs.

Service Contracts*

We offer a broad selection of planned maintenance service contracts, from the Bronze agreement providing annual inspections, to fully comprehensive Gold contracts that can include the cost of all parts and labour.

In addition, we can offer weekly remote performance checks, failure alarms sent to a mobile or email account and pump rental cover, in the event of a breakdown. Finally, the Platinum purchase scheme provides comprehensive cover and easy payment terms for the first five years of operation.

Warranty on repairs*

Flygt has confidence in both its products and service skills, and offers a 12 month warranty on the whole pump - not just the repair.

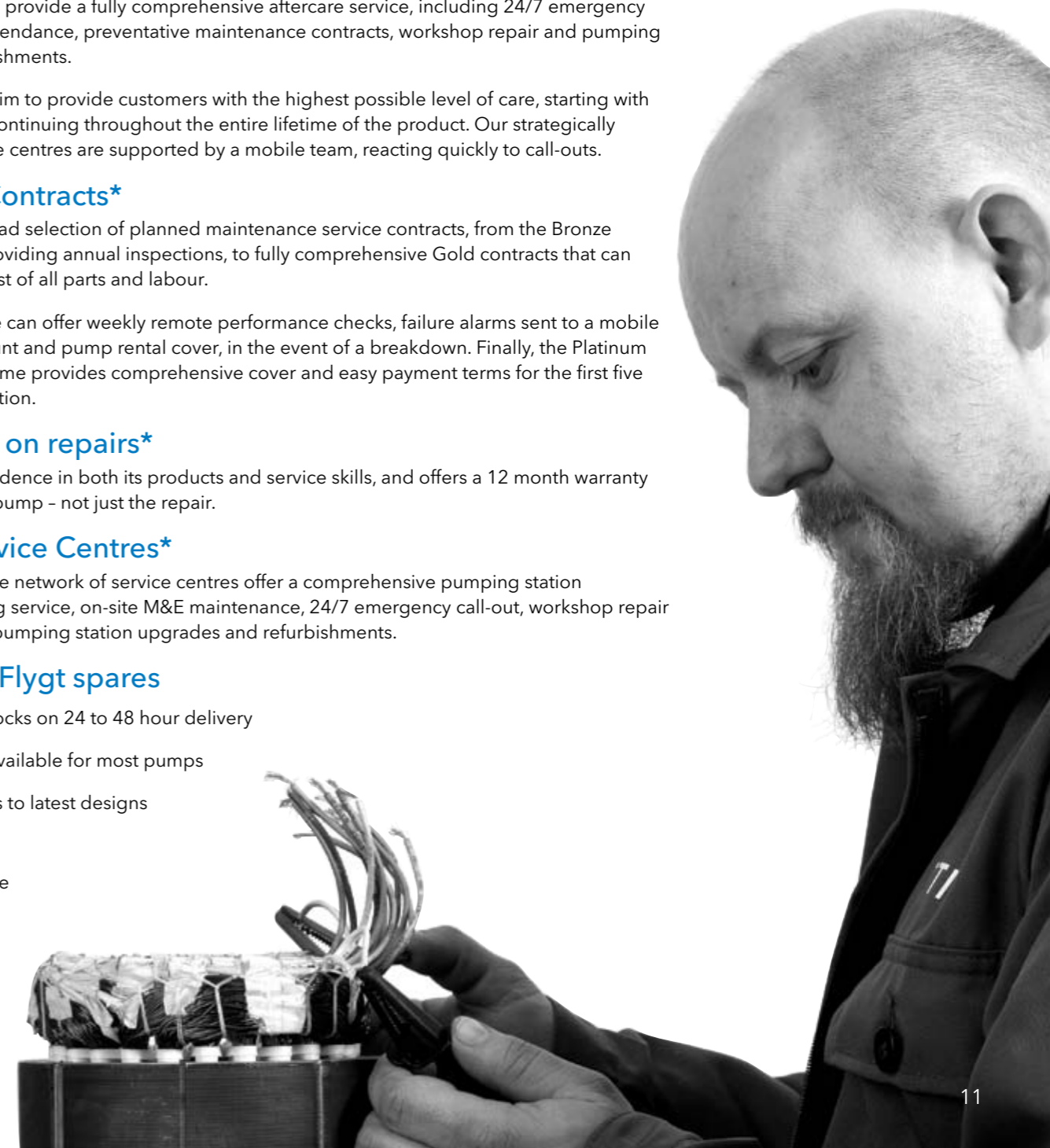
Flygt Service Centres*

Our nationwide network of service centres offer a comprehensive pumping station commissioning service, on-site M&E maintenance, 24/7 emergency call-out, workshop repair facilities, and pumping station upgrades and refurbishments.

Genuine Flygt spares

- Extensive stocks on 24 to 48 hour delivery
- Repair kits available for most pumps
- Upgrade kits to latest designs

*see back page



Xylem ['zīləm]

- 1) The tissue in plants that brings water upward from the roots
- 2) A leading global water technology company

We're 12,000 people unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyse, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

For more information on how Xylem can help you, go to xylem.com.



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WEDECO



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Please note that there is a variation in the type of planned maintenance / service contracts and emergency service call-out available in the Republic of Ireland. Please contact our Dublin office for full details.

Rental and Service

National Customer Care Centre
Tel 0845 707 8012