



ITT

Water & Wastewater

Flygt pressurized sewage systems

For homeowners, residential associations
and professionals



Engineered for life

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Pressurized sewage systems

No one knows more about pressure



For more than a quarter of a century, ITT Water & Wastewater has installed and maintained pressurized sewage systems around the world. These systems provide reliable, effective and cost-optimized connection for a single home or an entire community to the municipal wastewater collection network. Right from the start, we work with you to design, install and maintain the optimal system for your needs. All according to set standards.

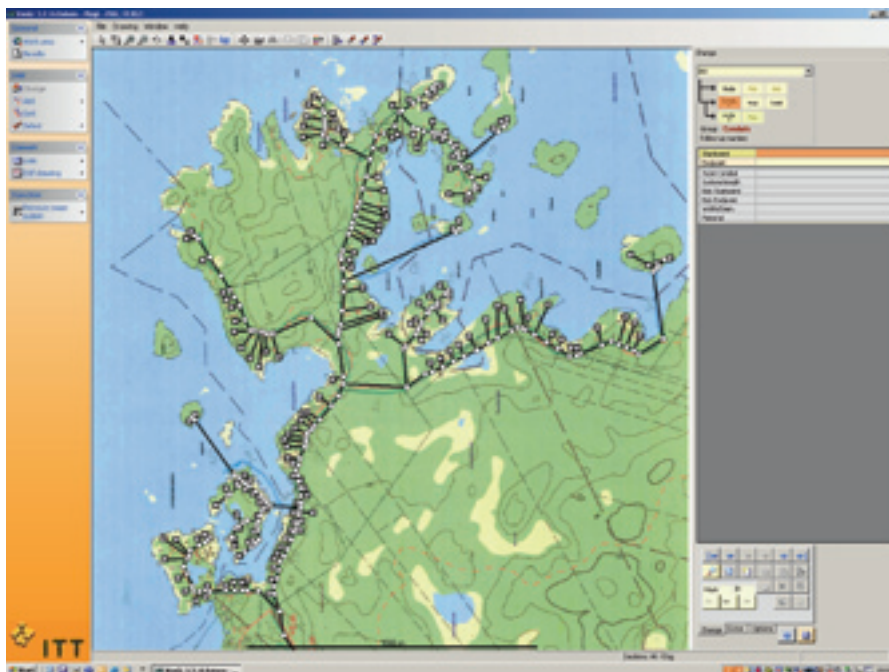
Moving wastewater can be an uphill battle. Obstacles, such as bedrock and tough topographical conditions, present challenges. For times like these, conventional gravity sewer systems don't make the grade. Pressurized sewage systems do.

A pressurized sewage system consists of a collecting tank, a pump and the pipes required to feed wastewater into the sewer main. Several tanks and pumps, or pump stations, and pipes form a pressure sewage network.

With stricter environmental regulations calling for smarter wastewater transportation, pressurized sewage systems have proven to be a safe, flexible and reliable way to move wastewater cost-effectively.

Pipe size matters

Consider the task of digging deep wide trenches for gravity feed sewage pipes. These are larger than the small pipes used for pressurized sewage systems. Laid in shallow narrow trenches that follow the natural contour of the ground, these smaller pipes effectively lead wastewater away from each property to the sewer mains, thanks to the use of grinder pumps that effectively reduce solids to slurry.



ITT Water & Wastewater uses a software specially designed for PSS systems with Flygt pumps.

Bigger savings

The advantages of pressurized sewage systems are clear: effective wastewater transportation at minimum depth, minimizing the toll on the environment and inconvenience to neighbors. Better yet, this smart economic alternative to gravity feed sewage systems costs less to install and maintain.

EN standard compliance

All Flygt pressure sewage systems are engineered to the EN1671:1997 standard that includes:

- design
- operation
- maintenance
- installation
- test methods

We meet all the functional requirements, including minimum water velocity and retention time.

Fast startup, long life

Flygt components work well together from the start and keep on working – often for decades without requiring any maintenance. So commissioning is quick and easy and maintenance is just as painless.

Engineering know-how

You can count on us for comprehensive planning services and innovative engineering solutions to customize exactly the right system for your needs. Just give us the map of your community or backyard. What you get in return is pressurized sewage system know-how. We know the critical points where problems are likely to occur. We consider the ecological, economic and environmental aspects of system design.

But our commitment doesn't stop there. We provide a wide range of services and systems for monitoring and control. Whether you are responsible for a single system for your vacation home or for remote monitoring of all the homes within a specific township or district, ITT Water & Wastewater can support you with unmatched engineering expertise.

Customize a standard package

Selecting your pressurized sewer system is simple. Choose one of our standard packages: basic, advanced or professional.

Then let us tailor it to your precise requirements. Because we optimize your system according to specification, you only pay for exactly what you require. No more, no less.

Mix and match

Most likely, your system has a unique set of conditions and requirements. What's perfect for flat terrain differs from what's ideal for areas with a high water table. And what's right for a mountain cabin, golf course or camping ground is far from ideal for a residential community.

At ITT Water & Wastewater, we recognize diversity. Which is why every single Flygt component is designed to work together in any combination.

So mix and match. Or better yet, let us do that for you. Our engineers help find the ideal arrangement that best suits your requirements.

Flygt pressurized sewage systems

	Basic package	Advanced package	Professional package
Who	Single homeowners, vacation homeowners, private homeowners associations.	Real estate developers, contractors and municipal wastewater professionals.	Real estate developers, contractors and municipal wastewater professionals.
What	<ul style="list-style-type: none">• Complete package with single-phase electrical connection• Single pump	<ul style="list-style-type: none">• Complete single- or three-phase package with heavy-duty pump and deep pump station for long inlet pipe.• Single pump	<ul style="list-style-type: none">• Complete single- or three-phase package with heavy-duty pump and deep pump station for long inlet pipe for communication and remote supervision.• Single or dual pumps
When	<ul style="list-style-type: none">• For single-family homes	<ul style="list-style-type: none">• For a single- or multi-family residences	<ul style="list-style-type: none">• For a single-family residence, several households or an entire residential community• High reliability in harsh conditions• Higher availability required
Why	<ul style="list-style-type: none">• Economic• Alarm	<ul style="list-style-type: none">• Economic for high availability• Alarm and logging	<ul style="list-style-type: none">• Economic for highest possible availability• Remote control for increased safety and reliability
Where	<ul style="list-style-type: none">• In hilly or flat areas• For places, such as golf courses and camping grounds, situated outside populated areas• Where bedrock or groundwater present a challenge• Wherever minimum disruption is required or desirable		

Pump it up

Reliable and cost-effective, the Flygt Basic Package pumps residential wastewater up to the sewage main.

A simple, yet powerful package

The Flygt Basic Package includes a complete pre-fabricated Flygt Micro pump station with built-in outlet connection, pump starter/controller, grinder pump, high-level sensor and audible alarm. Think of it as a plug-and-play package that's easy to install underground, connect, commission, operate and maintain.

Made of durable lightweight polyethylene, this self-cleaning pump station provides trouble-free operation. The high-level sensor combined with monitoring features makes the Flygt Basic Package convenient and easy-to-use. The battery-operated audible alarm alerts homeowners when attention is required. But rest assured, long-lasting, trouble-free operation is the Flygt norm.



Flygt FGC 010



Flygt ATU 001



Flygt Micro 7G



Flygt ENM-10



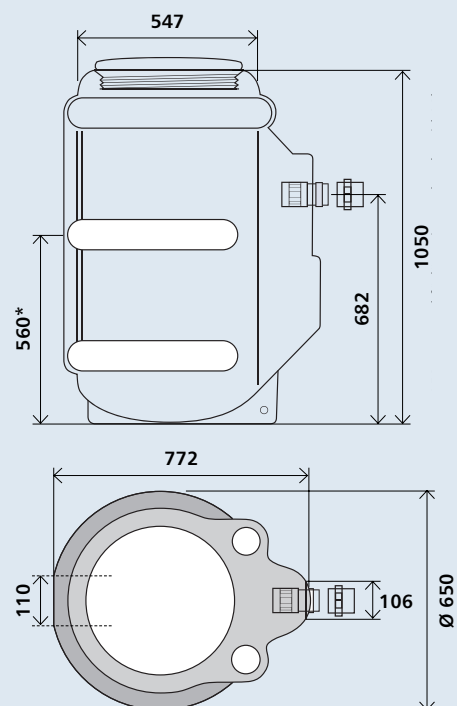
Flygt DXGM 25-11

Technical data	
Installation depth	1 m or 1.35 m with extension unit
Effective sump volume	100 liters
Station weight	26 kg. With optional extension unit 32 kg.
Pump weight	19 kg
Width	650 mm diameter
Inlet diameter	DN100/110
Inlet depth	200–490 mm; with extension unit 500–790 mm
Outlet diameter	DN50
Access cover	Lockable polyethylene cover
Rated current	7.0 A
Voltage	230 V
Number of phases	1

Standard components

- Flygt Micro 7G pump station
- Flygt DXGM 25-11 grinder pump
- Flygt FGC 010 pump starter
- Flygt ATU 001 alarm unit
- Flygt ENM-10 float switch

Dimensions



Beyond the basics

To handle larger capacity for wastewater transportation from one or more households to the sewer mains, count on the Flygt Advanced Package to get the job done.

Larger capacity, better control

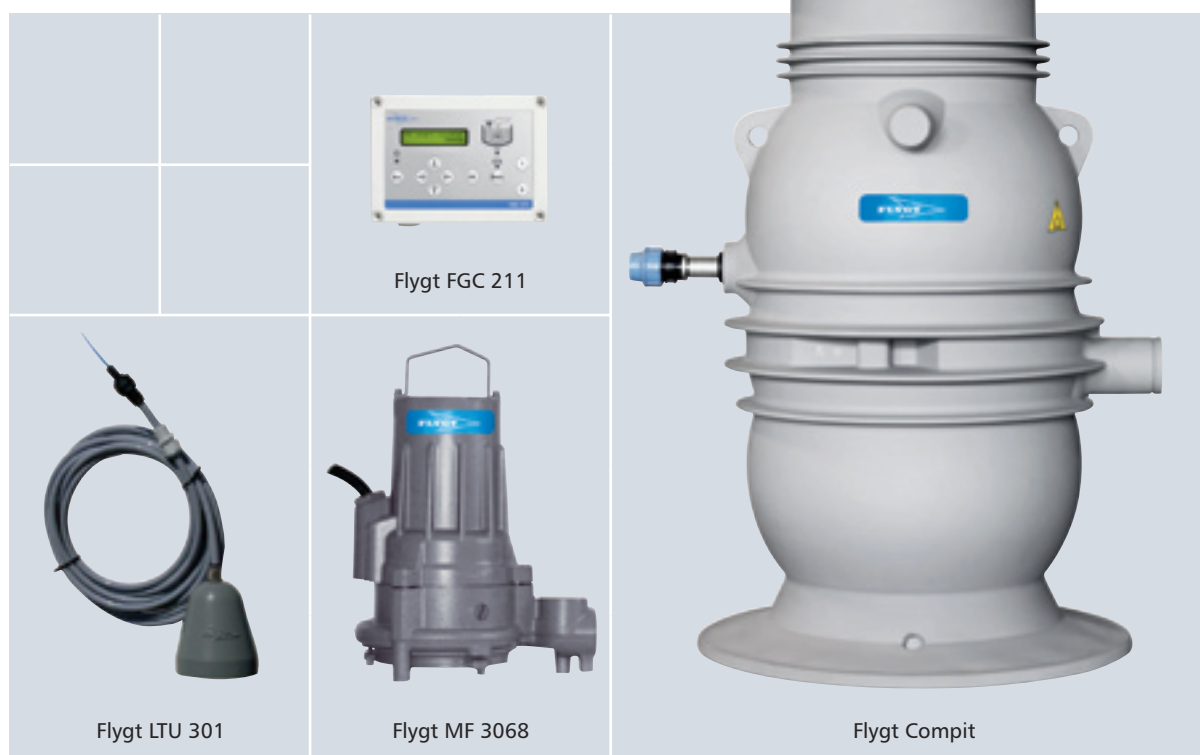
The Flygt Advanced Package includes a prefabricated Flygt Compit pump station to handle larger capacity with better control. Convenient and easy to use, the Flygt Advanced Package provides controlled pumping and event log.

Ready for installation and immediate connection upon delivery, the pump station comes with built-in inlet and outlet connections, robust grinder pump, and advanced pump controller with display

for measurement of level and current and convenient log to record events.

Made of durable lightweight polyethylene, this self-cleaning pump station is easy to handle and flexibly designed for installation at depths between 1.9 and 3 meters.

For the ultimate in pumping reliability, the station comes equipped with a Flygt M 3068 grinder pump, that handles solids and fibers with ease. This translates as reliable trouble-free operation.

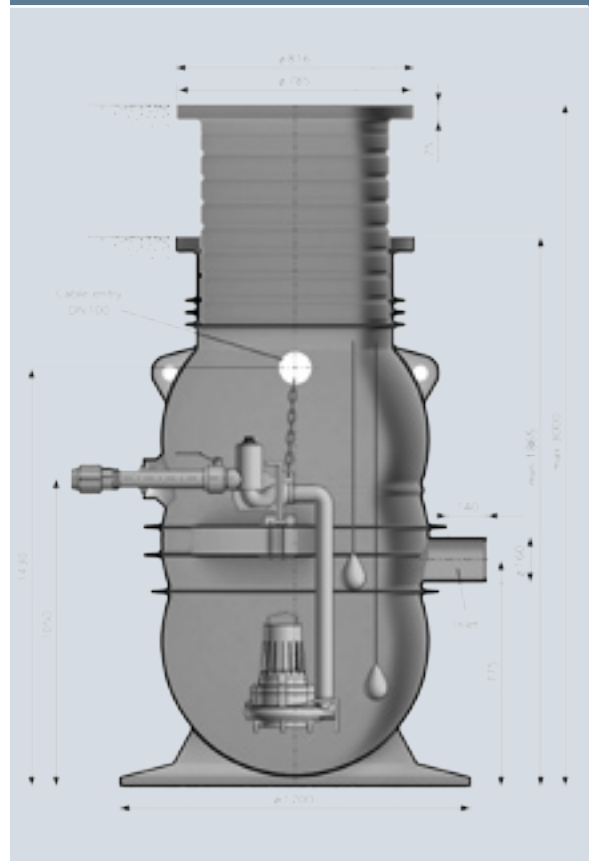


Standard components

- Flygt Compit pump station
- Flygt MF 3068 grinder pump
- Flygt FGC 211 pump controller
- Flygt LTU 301 pneumatic pressure sensor with open bell or Flygt ENM-10 float switch as start/stop and/or high level switch

Technical data	
Installation depth	1.9 to 3 meters using an extension shaft that can be cut to required length
Effective sump volume	450 liters
Station weight	181 to 244 kg
Pump weight	31 kg
Width	1,200 mm diameter
Inlet diameter	DN150/110
Inlet depth	1,130 to 2,225 mm with extension unit
Outlet diameter	DN50
Access cover	<ul style="list-style-type: none"> • Lockable polyethylene cover • Class A (15 kN), EN 124 • Class B (125 kN), EN 124 • Possible to adapt for Class D (400 kN)
Rated current	5.3 A
Voltage	400 V
Number of phases	3

Dimensions



Simply the best

Economic and reliable, the Flygt Professional Package provides high performance wherever wastewater requires pumping to sewer mains. Applications range from single homes to several households to entire residential communities.

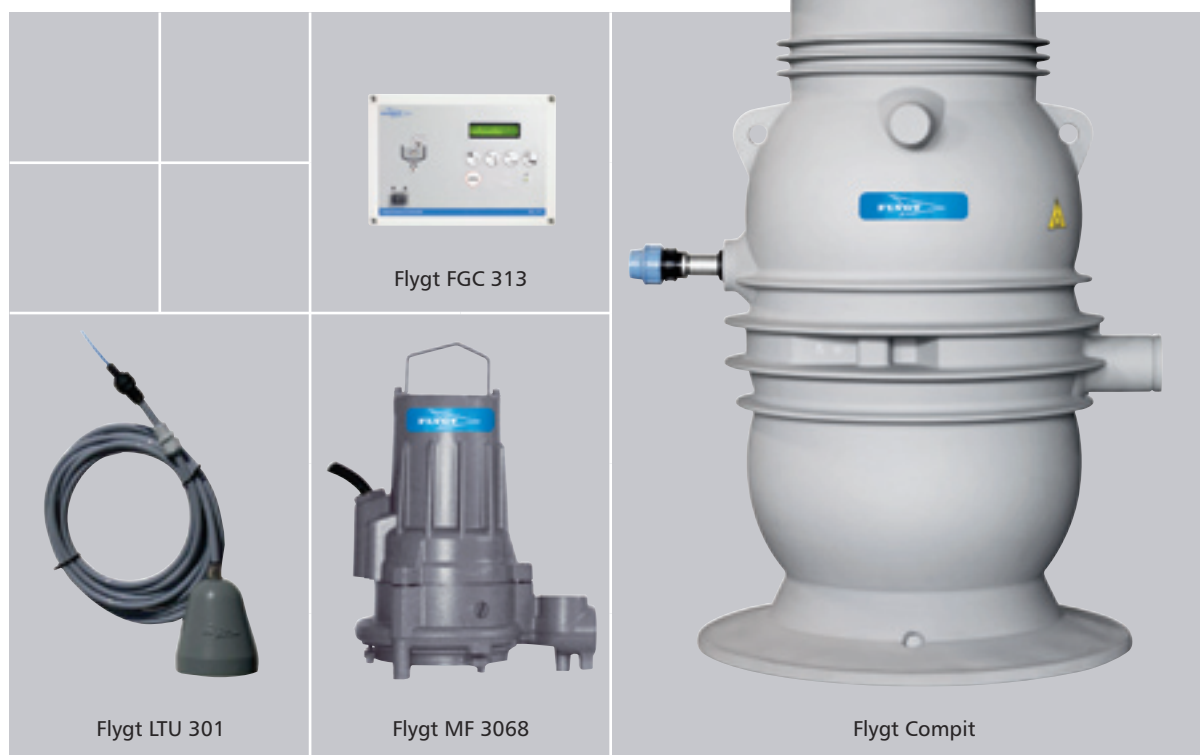
A top performer

As its name implies, the Flygt Professional Package is designed for use by professionals. Superior monitoring and control functionality puts you in full control of operations.

Like the Flygt Advanced Package, the Flygt Professional Package is pre-assembled, ready for immediate use and provides reliable trouble-free operation. With durable polyethylene construction, this lightweight self-cleaning pump station

can easily be installed at depths between 1.9 and 3 meters. Standard pump station components include built-in inlet and outlet connections, robust Flygt M 3068 grinder pump, sophisticated pump controller and pneumatic pressure sensor with open bell.

The Flygt Professional Package, however, provides more sophisticated communications between pump station and your control center than the Flygt Advanced Package. Detailed event information is immediately flagged. Together with SCADA applications, our systems provide local and remote control of all pumping operations in a sewage network.



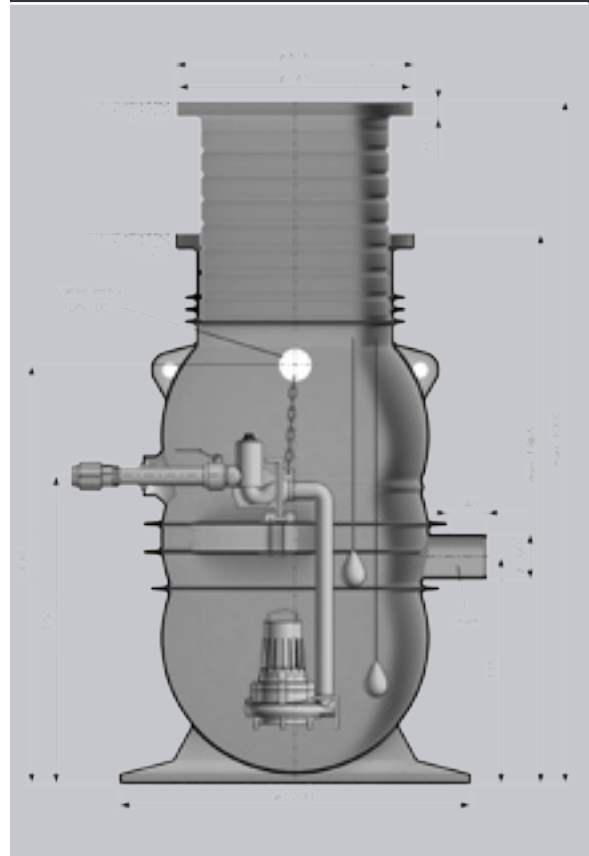
Standard components

- Flygt Compit pump station
- Flygt MF 3068 grinder pump
- Flygt FGC 313/323 pump controller
- Flygt LTU 301 pneumatic pressure sensor with open bell or Flygt ENM-10 float switch as start/stop and/or high level switch

Technical data

Installation depth	1.9 to 3 meters using an extension shaft that can be cut to required length
Effective sump volume	450 liters
Station weight	181 to 244 kg
Pump weight	31 kg
Width	1,200 mm diameter
Inlet diameter	DN150/110
Inlet depth	1,130 to 2,225 mm with extension unit
Outlet diameter	DN50
Access cover	<ul style="list-style-type: none"> • Lockable polyethylene cover • Class A (15 kN), EN 124 • Class B (125 kN), EN 124 • Possible to adapt for Class D (400 kN)
Rated current	5.3 A
Voltage	400 V
Number of phases	3

Dimensions



Pumps

Engineered for durability

Versatile, robust and reliable, Flygt pumps are rugged enough to deliver non-stop performance for virtually all application and performance requirements – time and again.

Take our Flygt submersible grinder pumps, for instance. These powerful pumps come with a specially designed impeller to handle the demands of pressurized sewage systems. Made of chromium-alloy and hardened stainless steel, the impeller has a hydraulic design that increases efficiency and reduces wear. The heavy-duty cutting device shreds pumped solids into pieces so small

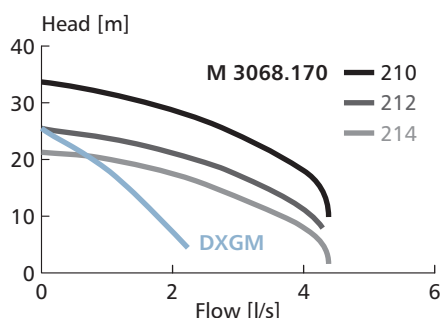
that they easily pass through the narrow pipes of the system.

Pumps you can depend on

Quality Flygt pumps provide reliable trouble-free performance. The double shaft seal system protects the pump motor from leakage. Other features, such as the durable wear-resistant grinder device, patented adjustable heavy-duty cutting device, dry motors for submersible duty and built-in thermal sensors, are hallmarks of quality, reliability and long service life.

All Flygt grinder pumps are designed according to EN 12050-1.

Performance



Technical data

	M 3068	M 3068	M 3068	DXGM 25-11
Impeller No.	214	212	210	—
Discharge size	R 1 1/2"	R 1 1/2"	R 1 1/2"	R 1"
Rated power (kW)	1.5	1.7	2.4	1.1
Number of phases	1	3	3	1
Voltage	230	400	400	230
Rated current (A)	8.9	3.8	5.3	7.0

Selection tables

Pump	Static head [m]	Max. pipe length [m]
M 3068.170 (pipe Ø 63 mm)	1	1,400
"	4	1,200
"	8	1,000
DXGM 25-11 (pipe Ø 50 mm)	1	700
"	4	500
"	8	300

Note: Please consider pipe velocities when several pumps running simultaneously.



Flygt M 3068

Heavy-duty and robust, this high-head submersible grinder pump is one of our star performers and an excellent choice for larger installations. Cast iron pump and motor casing make this pump the natural choice for rugged operating environments.



Flygt DXGM 25-11

Compact and lightweight, this submersible grinder pump delivers unmatched performance. Solids are reduced to slurry for convenient hassle-free pumping. Cast iron pump body and solid stainless steel motor casing make this pump the ideal choice for residential sewage systems.

Monitoring and control

Know when the pressure is off



Flygt ATU 001

This easy-to-use battery-operated audible alarm alerts homeowners when service is needed.



Flygt FGC 200

Controllers providing comprehensive functionality, flexible sensor handling and critical operational data.



Flygt FGC 300

In addition to the features of FGC 200, this controller enables a flexible choice of options and communication solutions.

With Flygt pressurized sewage systems your wastewater systems are always on. And when they're not, you'll be the first to know.

Total control

For total performance, you need complete control. Look no further. Flygt monitoring and control equipment helps increase the safety and reliability of your system. Based on an open technical platform, you have the flexibility to manage all system components for a single home or an entire community.

Total peace of mind

Purchasing Flygt monitoring and control equipment for your pressurized sewage system is an investment in peace of mind. Better yet, these smart devices contribute to reduced operational costs by boosting energy savings and minimizing maintenance.

Flygt management systems

To help you optimize operations, there are several options for Flygt monitoring and control equipment.

Flygt ATU 001. A perfect complement to the Flygt Basic Package.

Flygt FGC 200. For the Flygt Advanced Package

Flygt FGC 300. Complementing the Flygt Professional Package

Flygt AquaView. Used together with a Supervision Control And Data Acquisition (SCADA) system, Flygt AquaView cuts operational costs and provides total control of your pumping stations. SCADA is an integrated system that presents plant information as easy-to-understand on screen graphics. It provides customers with a comprehensive overview of the plant, including alarm handling. An overview map shows operational values and status. Communication with SCADA system can be provided through a local operating network (LON), GSM or telephone line, or radio.

Component	1-pump	2-pump	SCADA/ supervisory system
Flygt ATU 001	•	•	
Flygt FGC 211/FGC 211-L	•		
Flygt FGC 313	•		•
Flygt FGC 323		•	•

Component	Type of alarm	Operational data log
Flygt ATU 001	Audible alarm unit	—
Flygt FGC 211	Alarm device optional	<ul style="list-style-type: none"> • Level information • Alarm log • Pump current, Running hours, Number of starts
Flygt FGC 313	<p><i>Communication support:</i> PSTN, GSM, Radio, LON, Fixed line, Ethernet, Fiber optic</p> <p><i>Open platform:</i></p> <ul style="list-style-type: none"> • Interfaces with different SCADA systems • Supports Flygt AquaCom, Comli and Modbus • SMS alarms 	<ul style="list-style-type: none"> • Level information • Alarm log • Pump current, Running hours, Number of starts

Pump stations

Proven in practice

ITT Water & Wastewater offers a wide range of Flygt pump stations in different sizes and with different pipe connections to meet your specific requirements. Based on a well-known wastewater transportation technique, Flygt pump stations are widely used around the world.

Rugged and ready to work, our pre-fabricated, wear-resistant pump stations are designed specifically to handle raw wastewater. We recommend the optimal solution for your needs, so you can rest easy.

Challenges, such as odor, clogging, sedimentation and emissions of harmful gases, do not pose a problem. All stations are designed according to EN 12050-1.

Flygt Micro 7G pump station. For single-family homes, the Micro 7G comes pre-assembled with a single pump, internal piping and in- and outlet connections for immediate installation in the ground.

Flygt Compit pump station. The ideal solution for several households or large communities, this rugged pump station comes pre-assembled for one or two pumps, internal piping and in- and outlet connections for immediate installation at depths between 1.9 and 3 meters.



Micro 7G

This lightweight polyethylene pump station comes with a tight rubber seal its inlet connection to ensure convenient leak-free installation. A sturdy access cover ensures reliable closure and keeps outlying areas odor-free.



Compit

The Compit provides trouble-free operation. It is self-cleaning, thanks to its shell-formed base that prevents deposits from settling on the bottom. Choose the access cover that matches your needs. Options are available for different traffic loads, including class A, B and D.



Accessories

When proper function and high performance count

Use these Flygt accessories to boost the performance of your pressurized sewage system. Accessorizing helps you maximize performance and minimize costs.



Flygt ENM-10 float switch

Enjoy control at its simplest. Freely suspend this mechanical switch in its plastic casing at the desired height with its cable. When the casing tilts, the mechanical switch will close or break (open) the circuit. This starts or stops a pump or activates an alarm device.



Flygt ATU 001

This battery-operated unit sounds an audible alarm when any malfunction of an external contact, such as the triggering of a high level sensor, occurs.



Flygt LTU301

Pneumatic pressure sensor with open bell. This measuring probe is connected by an air tube to a pressure sensor, which generates an analog signal that is transmitted to a Flygt FGC or similar pump controller.



Flashing light alarm

An alarm signal light connected to the controller alerts the home-owner or operator of an event that requires attention, such as pump stop or high water level.

Support and service

Always close to you



As a responsive, reliable and secure service supplier, ITT Water & Wastewater provides quick professional service and support. We ensure effective and trouble-free operation of your system – from design, engineering, installation to monitoring and control service and support. All brought to you conveniently in your own backyard.

Our pressurized sewage systems are built for years of care-free operation. However, when you need assistance, you'll always find support nearby. In addition to our own service centers, we have a network of local service partners close to you.

Our services

Our service organization offers you the assistance you need with everything from installation and inspections to traditional service and repair. Qualified service engineers perform the usual service and repair work on site. However, if mechanical repair is required, we take care of your equipment in one of our nearby workshops. In addition, we provide services to monitor your system and respond to alarms.

Service contracts

To complement whichever Flygt package you choose, we also offer a wide range of service contracts to maximize uptime and minimize

downtime. Choose a basic annual inspection or a comprehensive contract that covers everything down to original parts replacement. Or let us tailor a contract that covers troubleshooting onsite and other services. Pay only for what you need – no more, no less.

Reliable, cost-effective operation

Whether you're a homeowner or a wastewater professional, we always strive to maximize the reliability and efficiency of your systems.

Using the original spare parts from ITT Water & Wastewater and service and support from any of our service centers or approved service partners ensures that your system always lives up to your demands.

That means your pressurized sewage systems will continue to run safely, economically and trouble-free, year after year. ■

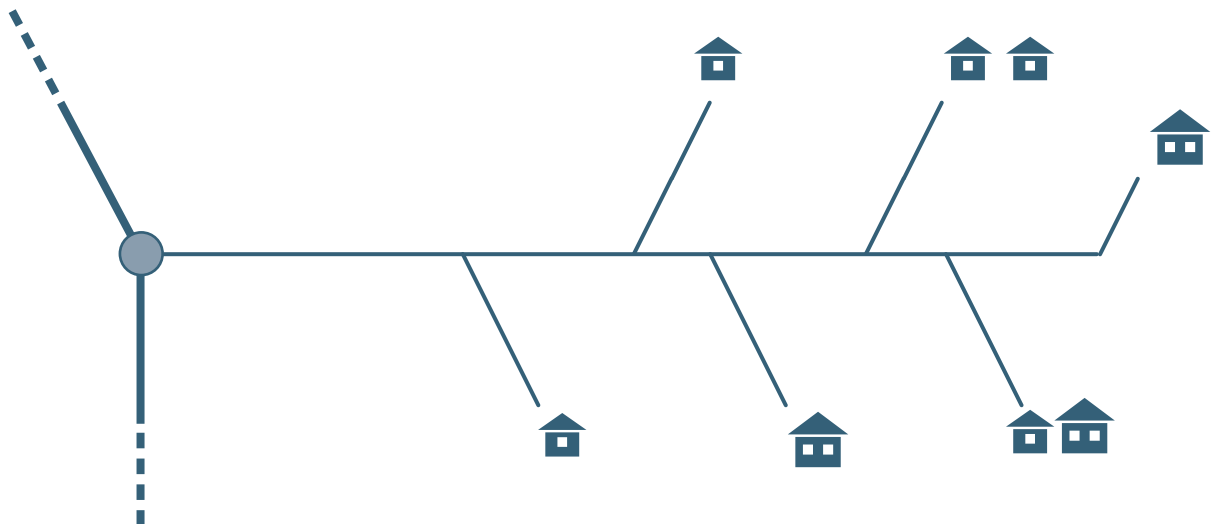
**Let us optimize and
customize your system.**

1) Is house occupancy seasonal or year-round?

2) How many households will there be in the
system?

3) Will there be several households per pump
station?

4) Please provide pipe levels and distances.



5) Which functionality of monitoring and
alarm equipment should be used?

6) What level of service and maintenance are
required?

For contractors:

☐ Water table

☐ Soil conditions

☐ Climatic conditions (Frost depth, lowest tem-
perature, duration)

Are there any area development sequence
scheduled?

Notes



What can ITT Water & Wastewater do for you?

Integrated solutions for fluid handling are offered by ITT Water & Wastewater as a world leader in transport and treatment of wastewater. We provide a complete range of water, wastewater and drainage pumps, equipment for monitoring and control, units for primary and secondary biological treatment, products for filtration and disinfection, and related services. ITT Water & Wastewater, headquartered in Sweden, operates in some 140 countries across the world, with own plants in Europe, China and North and South America. The company is wholly owned by the ITT Corporation of White Plains, New York, supplier of advanced technology products and services.

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