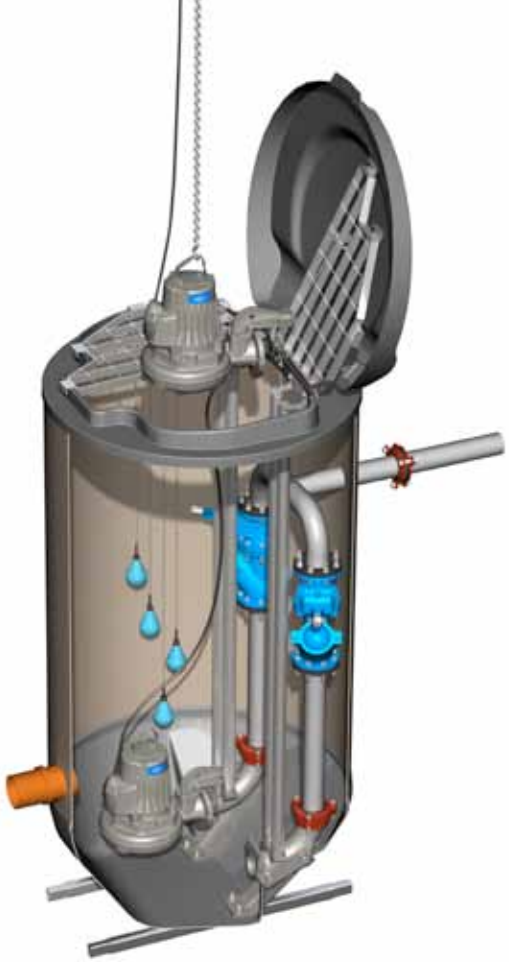


Flygt TOP turnkey pump stations

COMPLETE PRE-ASSEMBLED SOLUTIONS

FLYGT
a xylem brand

When reliability is everything

The Flygt TOP pump station advantage

- Pre-assembled and factory-tested
- Self-cleaning design
- Proven performance
- Minimal sedimentation
- Minimal residual water
- Easy to install

Proper pump station design is critical to operational reliability. Without the right design, sedimentation and sludge buildup can cause major problems, pose safety hazards for your staff and, worst of all, make the station stop working.

Self-cleaning design
Flygt TOP turnkey pump stations leave nothing to chance. Specially engineered to your exact requirements, these pre-assembled units come complete with everything you need.

The only thing that's missing is sedimentation and sludge buildup on the sump floor, thanks to optimized geometry, minimal floor space and self-cleaning capabilities. Because the floor area of Flygt TOP pump stations is much smaller than standard sumps, all sediment collects directly beneath the pump, where suction is the strongest.

In addition, the patented geometry of the Flygt TOP pump station and its specially designed discharge connection optimize flow across the pumping station floor. The flow creates turbulence, which in turn suspends any settled solids in the wastewater for onward transport through the system.

This ensures that your pump station operates continuously, with the reliability, efficiency and safety that are the hallmarks of all Flygt products.

Three ways to implement Flygt TOP

- Install complete Flygt TOP turnkey pump stations
- Retrofit existing stations with Flygt TOP sump
- Construct new concrete pump stations with Flygt TOP sump

Continuously removes suspended solids

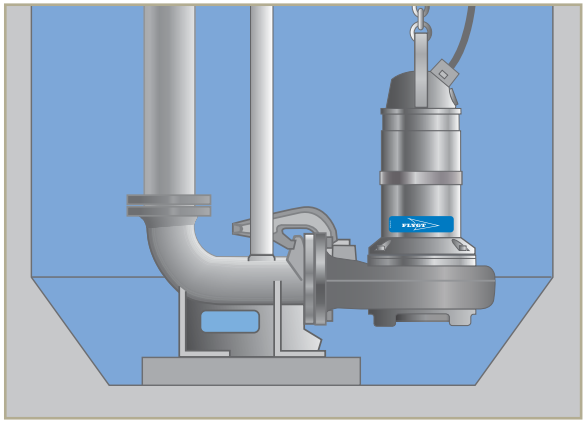
The Flygt TOP turnkey pump stations deliver outstanding self-cleaning performance both in laboratory tests and under real-life operating conditions.

In back-to-back laboratory tests, two sumps – a conventional sump and a Flygt TOP sump – were each filled with 400 liters (106 US gallons) of water and 49 kilos (108 lbs.) of solids. Water was pumped ten times back and forth from one sump to the other.

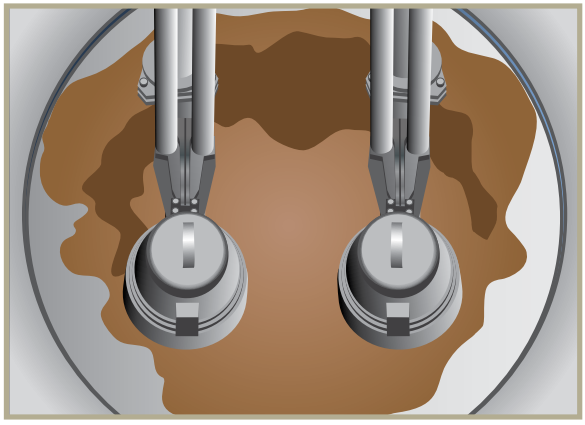
A total of 94 kilos (207 lbs.) of solids accumulated in the conventional sump; only four kilos (8.8 lbs.) of solids remained In the Flygt TOP sump.

These lab test results are replicated on a daily basis in thousands of Flygt TOP pumps stations operating around the world. The results are definitive: Flygt TOP pump stations have less sediment, less maintenance and less downtime.

Conventional pump sump

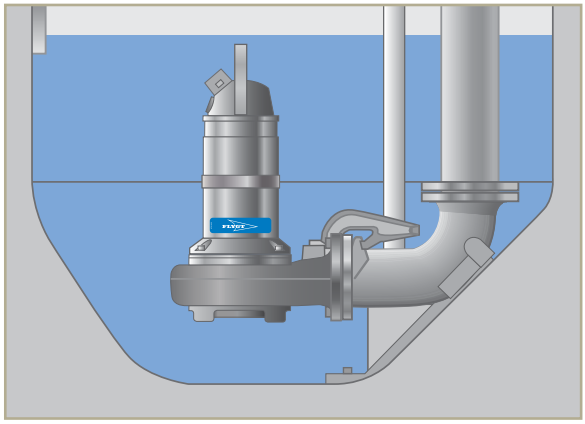


Conventional large flat sump floor encourages buildup of sludge and solids.

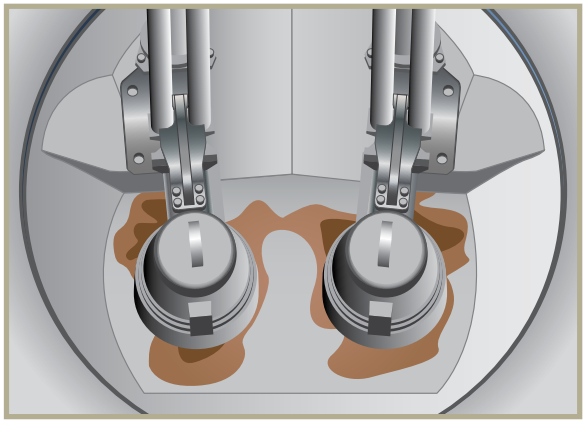


The further away the sumps walls are from the pumps, the greater the sediment buildup.

The Flygt TOP pump station



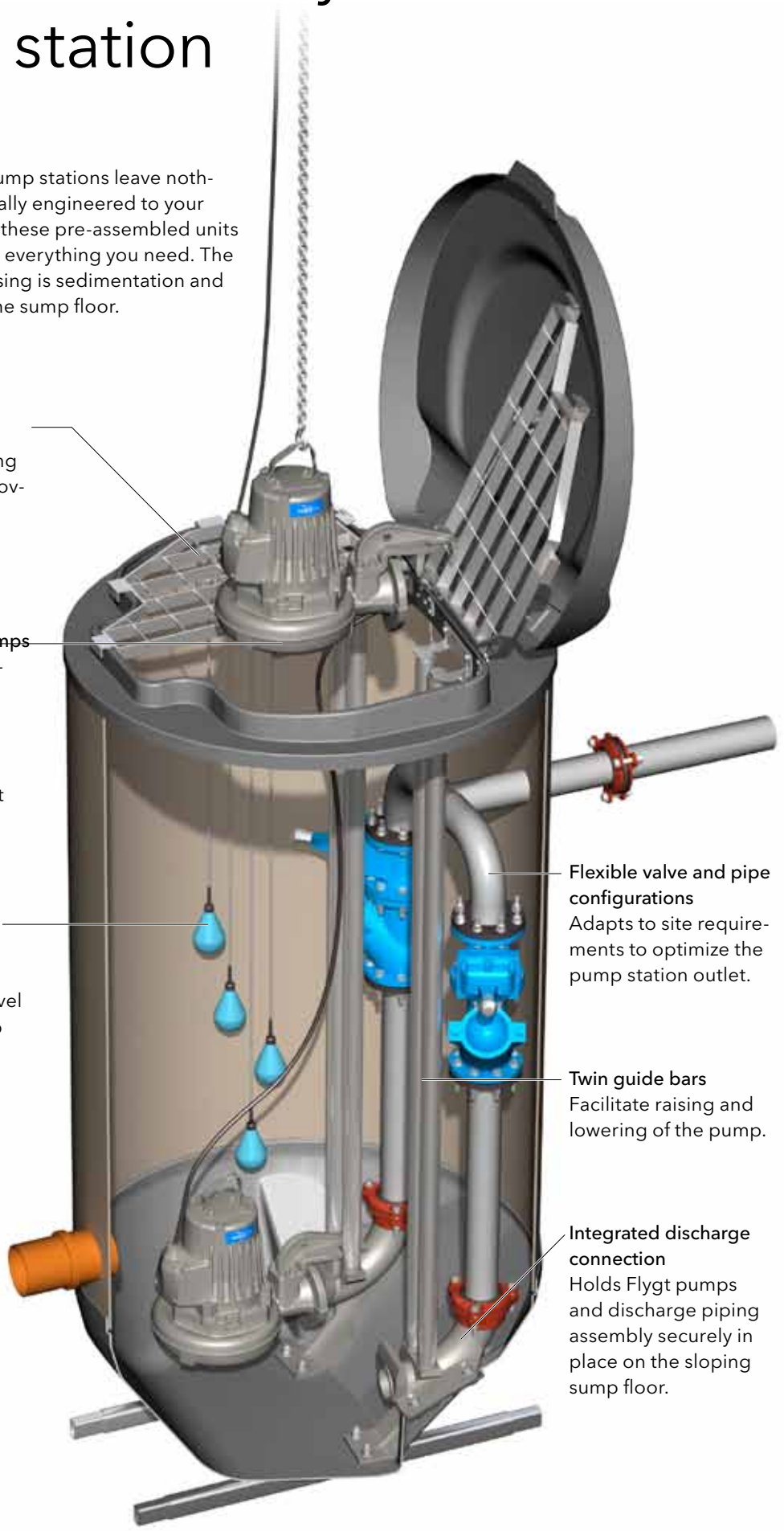
Minimal floor area and optimized geometries ensure high velocity, which efficiently suspends settled solids in wastewater.



Optimized geometry draws any solids remaining in the sump close to the pumps, where suction is the strongest. This eliminates the risk of solids buildup.

Flygt TOP turnkey pump station

Flygt TOP turnkey pump stations leave nothing to chance. Specially engineered to your exact requirements, these pre-assembled units come complete with everything you need. The only thing that's missing is sedimentation and sludge buildup on the sump floor.



Hinged two-section safety grid
Provides safety during maintenance or removal of equipment.

Flygt wastewater pumps
Ensure reliable, trouble-free operation. Choose your capacity and type – from Flygt grinder pumps to self-cleaning Flygt N-pumps.

Flygt ENM-10 level regulator switch
Provides reliable maintenance-free level control for the pump station.

Flexible valve and pipe configurations
Adapts to site requirements to optimize the pump station outlet.

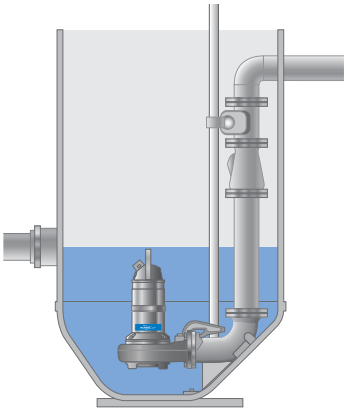
Twin guide bars
Facilitate raising and lowering of the pump.

Integrated discharge connection
Holds Flygt pumps and discharge piping assembly securely in place on the sloping sump floor.

Total engineering at its best

Pre-assembled ready-to-install pump stations
Flygt TOP turnkey pump stations come with everything you need to achieve the most reliable and cost-effective pumping solutions. Your Flygt TOP pump station is pre-assembled with a reliable Flygt pump, valves, discharge piping and inlet and outlet connections that meet your site requirements. Installation and startup is easy and requires minimal time.

Sustained high efficiency with Flygt N-pump
Renowned for reliable non-clogging operation, the Flygt N-pump is the revolutionary hydraulic heart of the pumping station. Superior self-cleaning capabilities and sustained high efficiency with remarkably low energy consumption make Flygt N-pumps the Number 1 wastewater pump in the world. Its flexible modular design enables you to tailor hydraulics and select the capacity, material and insert or chopper ring to meet specific application requirements.

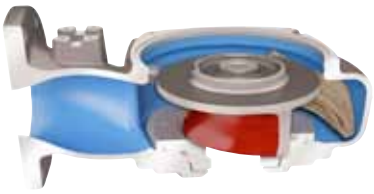


Install a ready-to-use Flygt pump station made of glass-fiber reinforced polymer (GRP) and pre-assembled with pump, valves, discharge piping and inlet and outlet connections.

Patented modular design of Flygt N-technology

THE SELF-CLEANING PUMP CONCEPT

Stage 1. Most solids entering the pump pass through the impeller between the impeller vanes. If a solid object gets caught on the leading edge of one of the vanes, it slides along the backswept shape towards the perimeter of the inlet.



Stage 2. Solids slide along the tip of the impeller vane inside the relief groove. The guide pin in the insert ring pushes all types of solids away from the center of the impeller, along the leading edge and out through the relief groove.

Dimensions and capacities

TOP	50	65	80	100 S	150 S	150 L
Station diameter, mm	800	1000	1200	1400	1600	1800
No. of pumps	1	2	2	2	2	2
Discharge sizes, mm	50	50 65	65 80	65 80 100	80 100 150	80 100 150
Capacity, l/s	4–10	4–10 6–15	6–15 6–30	6–15 6–30 10–40	6–30 10–40 30–95	6–30 10–40 30–95
Available as retrofit	Yes	Yes	Yes	Yes	Yes	Yes

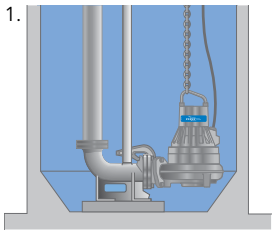
Boost efficiency with a retrofit or upgrade

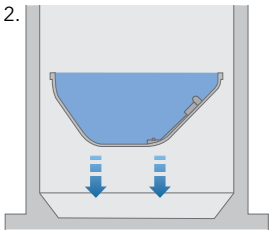
To breathe longer service life into existing pump stations, simply retrofit them with a Flygt TOP sump, upgrade them with a Flygt N-pump, or do both to realize even greater efficiencies.

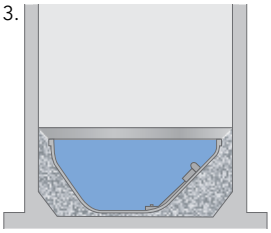
Methods of installation
In addition to Flygt TOP turnkey sump pump stations, Flygt TOP sumps are easy to retrofit in existing sumps or install new pump stations.

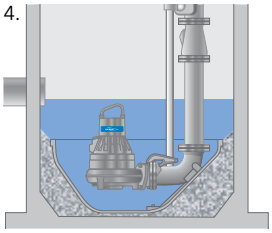
Flygt N-pump upgrade
Retiring an older wastewater pump? Take advantage of the sustained high efficiency and lower energy costs of the Flygt N-pump range. Available for almost every previous generation of Flygt pump, each Flygt N-pump upgrade kit contains everything you need to modernize your pump station with the most advanced pumping technology available.

Flygt TOP sump retrofit
Boost the efficiency of your existing pump station with a Flygt TOP sump. Use of your existing structure facilitates installation and eliminates costly excavation and construction work. Flygt TOP sump drastically reduces unplanned service calls while raising operational efficiency.

1.

Old sump

2.

Prefabricated TOP bottom

3.

Concrete filling

4.

Flygt equipment in position

Included in the Flygt TOP kits for large pumps, Flygt MULTI-JOINT™ discharge connection, secures Flygt pumps to the sloping Flygt TOP sump floor and fits discharge pipes of various material with diameters from 65 mm.

Smart options empower operations

Flygt APP pump controller is a SCADA/RTU system that provides advanced monitoring and control of pump station inflow and outflow.

Flygt APF cleaner automatically drains sump water to the lowest possible level to remove surface fat and grease as well as sediment at the sump bottom.

APP

APF

Supporting your business, every step of the way

Extensive monitoring and control

We supply hardware and software for complete process systems – from individual pump drives, starters, sensors and controllers to system software and scalable **SCADA** systems.

Genuine Flygt spare parts and warranty

When downtime isn't an option, rely on our global service network to deliver genuine Flygt spare parts to you – quickly and efficiently. All Flygt spare parts are backed by a solid 15-year availability guarantee.

Extensive engineering know-how
Xylem has extensive knowledge of fluid dynamics and vast practical experience in designing, operating and maintaining efficient wastewater transport systems.
We provide a broad range of engineering services, including:

- System analysis and calculations
- Sump design
- Water hammer calculations
- Pump start analysis
- Transient analysis
- Computational Fluid Dynamics (CFD)
- Scale model testing

In short, we can assist you with everything you need for optimal performance and economical, energy-efficient operation.

Empower your system
With Flygt monitoring and control products, you can control and optimize the performance of every component of your system. This helps reduce stress on pumps, valves and mains, enable reliable, efficient operation and prolong service lifetime.

Support for your Flygt pumps
Our global network of local service centers and service partners, provide integrated services to support safe, efficient and reliable operation. To ensure trouble-free operation and minimal downtime, count on us for quick, professional response and quality maintenance services, using genuine Flygt spare parts.

Xylem [ˈzīləm]

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, analyze, 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 xyleminc.com.

xylem
Let's Solve Water

Flygt is a brand of Xylem. For the latest version of this document and more information about Flygt products visit **www.flygt.com**

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