

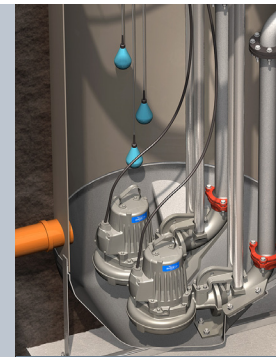


Flygt TOP sump

THE RELIABLE SELF-CLEANING SUMP

FLYGT
a xylem brand

Big on reliability, low on maintenance costs



The Flygt TOP sump advantage

- 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 sump

Flygt TOP sumps reliably reduce buildup of solids and sludge, thanks to optimized geometry, minimal floor space and self-cleaning capabilities. This ensures that pump stations equipped with Flygt TOP sumps work continuously.

Because the floor area is much smaller than standard sumps, all sediment in Flygt TOP sumps collects directly beneath the pump, where suction is the strongest.

In addition, the patented geometry of the Flygt TOP sump 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.



Three ways to build Flygt TOP sumps

- Construct new concrete pump stations
- Retrofit existing sumps
- Install complete turn-key pump stations

Continuously removes suspended solids

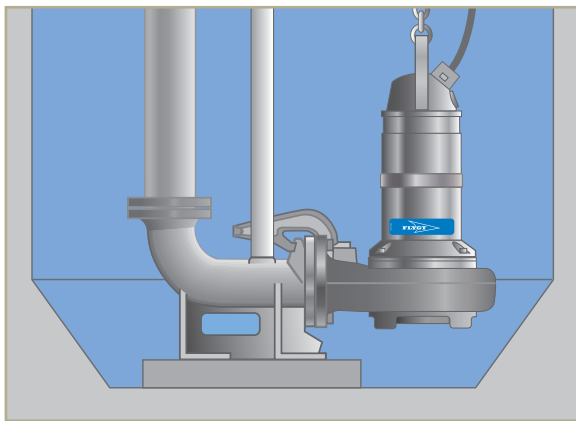
The Flygt TOP sump delivers outstanding self-cleaning performance both in laboratory tests and under real-life operating conditions.

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 10 times back and forth from one sump to the other.

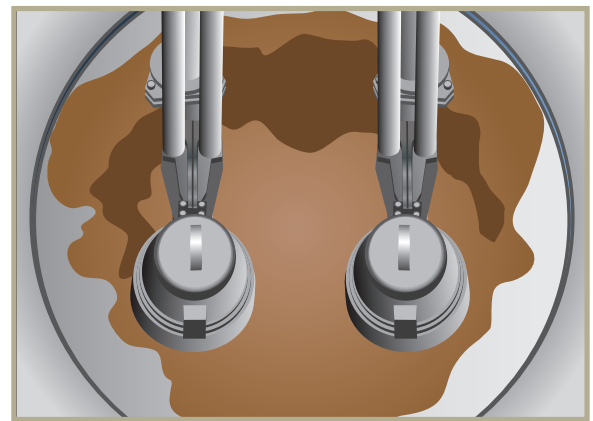
A total of 94 kilos (207 lbs.) of solids accumulated in the conventional sump; only four kilos (8.8 lbs.) of solids remained in the Flygt TOP sump.

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

Conventional pump sump

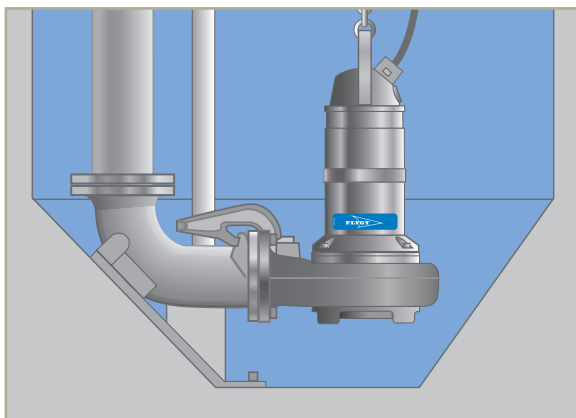


Conventional large flat sump floor encourages buildup of sludge and solids.

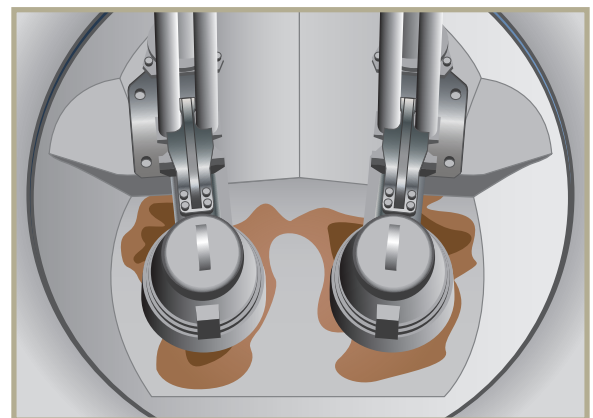


The further away the sumps walls are from the pumps, the greater the sedimentation.

Flygt TOP sump



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.

The self-cleaning team: Flygt TOP sump and N-pump

Team the Flygt TOP sump with Flygt N-pump for remarkable self-cleaning capabilities and sustained high efficiency. Then add Flygt accessories to reduce manual cleaning and installation time and costs further.

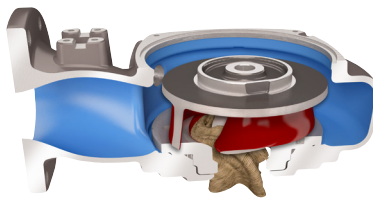
Eliminate clogging with Flygt N-pump

Renowned for reliable non-clogging operation, the Flygt N-pump is the revolutionary hydraulic heart of the pumping station. Superior self-cleaning

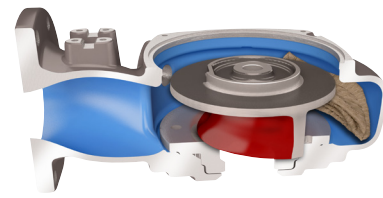
capabilities and sustained high efficiency with remarkably low energy consumption make Flygt N-pumps the Number 1 wastewater pump in the world. Its flexible modular design enables you to tailor hydraulics and select the capacity, material and insert or chopper ring to meet specific application requirements.



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 push all types of solids away from the center of the impeller, along the leading edge and out through the relief groove.

Reduce manual cleaning

The Flygt Flush Valve transforms a Flygt N-pump into a powerful mixer that frees sumps of sludge and sediment. At the start of each pumping cycle, the valve automatically opens for about 20 seconds, creating a powerful jet stream that suspends solids and fats in the wastewater. As the valve closes, the pump moves wastewater carrying the newly suspended solids out of the sump, clearing the sump floor of sediment and debris.



Reduce installation time

Save time and money with the Flygt MULTI-JOINT® discharge connection, included in the Flygt TOP kit for large pumps with discharge pipe diameters greater than 65 mm. Simply insert piping into the joint, which allows a maximum angular deviation of +/-7 degrees. No welding or drilling is required. Flygt MULTI-JOINT accommodates various piping materials, including stainless steel, cast iron, carbon steel, fiberglass, PVC and PE (special insert required).

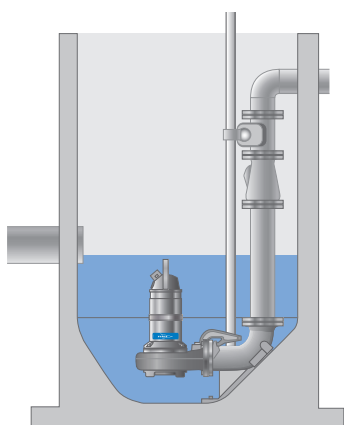


Flygt TOP sump makes installation easier

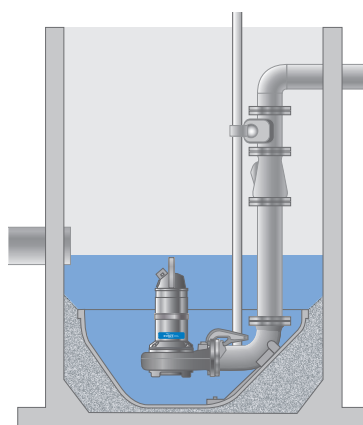
Flygt TOP sumps are available with five different discharge sizes to match different pumps and station dimensions and capacity requirements. These reduce sedimentation, maintenance and downtime, thereby boosting pumping station efficiency.

Methods of installation

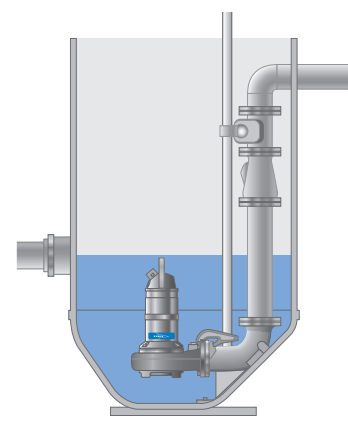
Flygt TOP sumps are easy to install and retrofit in new pump stations and existing sumps. For added convenience, complete, pre-assembled turnkey solutions make installation easier than before.



NEW CONCRETE PUMP STATIONS
Cast the sump floor for new pump stations using our special Flygt TOP mold.



RETROFIT EXISTING SUMPS
Install the prefabricated Flygt TOP sump floor and fill the gap between the old floor and the new with concrete. Wait a few hours until dry, then put your pump station back online. No additional excavation is required.

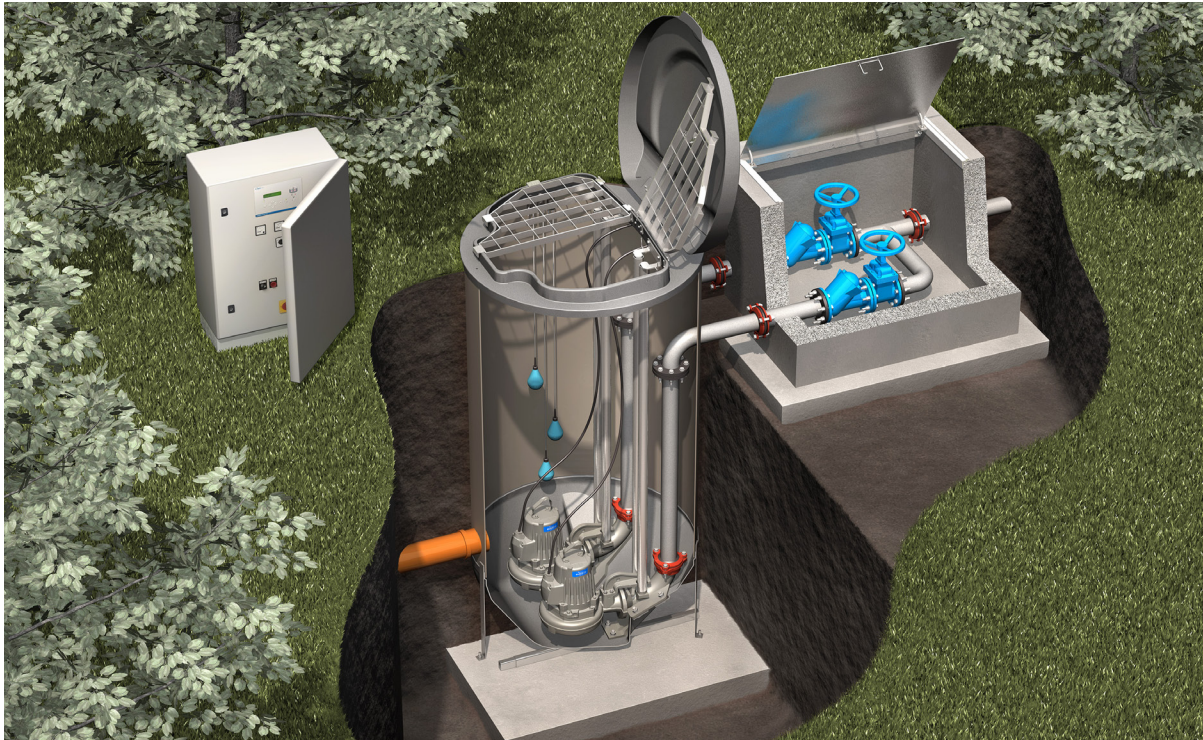


TURNKEY PUMP STATIONS
Install a ready-to-use Flygt pump station with Flygt TOP sump in glass-fiber reinforced polymer (GRP), pre-assembled with valves, discharge piping, inlet and outlet connections.

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

Fast, reliable installation with pre-fabricated stations



Ready-to-install prefabricated pump stations
Flygt TOP sump and N-pumps can be delivered ready to install in standard, prefabricated pump stations with everything you need. Our prefabricated pump stations feature the most reliable and cost-effective pumping solutions. Our solutions are

pre-assembled with your configuration of valves, discharge pipe, and inlet and outlet connections. Installation and startup is easy and requires minimal time.

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 is a supplementary electronic device for pump sump cleaning that drains sump water to the lowest possible level, thereby removing fat and grease on the water's surface as well as sediment at the sump bottom.



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 ['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, 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 xylem.com.



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