RAS & WAS Pumps (FLYGT Pump)

Secondary sludge pumping (RAS/WAS) is a part of the treatment plant process. Return activated sludge (RAS) is continuously pumped back into the secondary biological treatment tank as part of the treatment process. Excess from the settled sludge, which is waste activated sludge (WAS), is pumped to the sludge handling process.

Related applications include pumping sludge from septic tanks, industries and other wastewater treatment plants into the process.

Channel impeller pumps

These submersible Flygt C-pumps are built to handle capacities of up to 3000l/s (48000 gpm) with motors up to 775 kW (1050 hp). The standard versions of these pumps are made in cast iron and also come in industrial configurations for more demanding applications like municipal sewage and industrial effluent. Explosion-proof versions are also available. The classic C-pumps with shrouded single and multivane impellers have proven themselves over the years. They are designed with an extensive range of hydraulic units available to handle different types of media. These submersible pumps require neither special housing nor a superstructure to
support them, thereby reducing construction costs considerably. They are also designed to be small with motor and hydraulics integrated into one compact unit, which means that pumping stations are smaller and less complex to build. The smaller C-pumps come with the Flygt Nevaclog® impeller, which has excellent flow-passing properties. The multivane impellers for bigger pumps are designed for optimum hydraulic efficiency. Operating submerged, the pumps take up less space, and noise and cooling problems are virtually eliminated.

N-technology pumps

Flygt N-pumps handle capacities of up to 1,000 l/s (16,000 gpm) with motors from 1.3 to 310 kW (1.5 to 415 hp) and pumping heads of up to 100 m (330 ft). These self-cleaning pumps feature innovative features and functions that make them the most intelligent choice for a broad range of applications. The hardened cast iron version is ideal for typical wastewater applications and the chopper ring version is perfect for cutting long fibers or solids. The Hard-Iron™ version should be used in abrasive applications and waters where the cold causes erosion corrosion due to high oxygen content.
Mixed flow pumps, submersible

These mixed flow pumps are designed to be the most cost-effective medium head pumps with capacities of up to 5,000 l/s (80,000 gpm). Typical applications are water supply intakes, effluent pumping in treatment plants, and water attractions. These mixed flow pumps are high-capacity, medium-head pumps for clean and screened contaminated water. Flygt submersible mixed flow pumps operate directly in the pumped liquid and are easily installed and removed. The breadth of the product range makes them the ideal choice for a number of applications and for meeting specific performance requirements. The submersible mixed flow pump can be installed in many different ways to ensure cost-effective pump solution with high quality products and low overall costs.

Propeller pumps, submersible
Flygt propeller pumps are modern and are designed to be the most cost-effective high-flow pump range with capacities of up to 5,000l/s (80,000 gpm). Typical applications are storm water, waste water, water attractions, plant water intakes, and effluent pumping in sewage treatment plants. Flygt propeller pumps are state-of-the-art high-capacity, low-head pumps for contaminated and clean water. Flygt submersible propeller pumps operate directly in the pumped liquid and are easily installed and removed. The breadth of the product range makes them the ideal choice for a number of applications and for meeting specific performance requirements. The pump’s small footprint and the resulting compact pump station makes for very cost-efficient pump stations. The submersible propeller pump can be installed in many different ways to ensure a cost-effective pump solution with high quality products and low overall costs.

Ultra-low head pumps, submersible
Flygt ultra-low-head pumps are modern and designed to be cost-effective high-flow pumps with capacities of up to 1,300l/s, (21,000 gpm). Typical applications include return activated sludge in WWTP’s, water attractions, irrigation canals, and aquaculture.

Flygt ultra-low-head propeller pumps are state-of-the-art high-capacity ultra-low-head pumps for clean and lightly contaminated water. These submersible pumps are horizontally installed and operate directly in the pumped liquid, they are very easy to install and remove. The product offering makes them the ideal choice for a number of very-low-head applications. The pump’s compact size and the resulting compact station make for a very-cost efficient pump solution. The typical pump is installed directly on a vertical concrete wall with the discharge line going through the wall for the lowest installed cost.

Pump supervision
We provide pump monitoring systems well adapted for the different models of pumps and mixers. Monitoring systems such as Flygt MAS are designed to protect and stop a pump when necessary. They emit alarms, record measurements from sensors and modules, and have a powerful troubleshooting function. The embedded web functionality enables Internet access.

Pump and process controllers

Our wide range of pump and process controllers is designed for use with a variety of pumping applications. Each controller comes with a reliable alarm system and well thought out functions such as comprehensive pump control, advanced supervision of pump conditions, accurate flow calculation and an open communication platform.

SCADA
The Flygt AquaView SCADA software provides a complete overview of entire water and wastewater systems. It transmits alarms in the case of failures, logs data for reports, trends and events, and continuously monitors the state of linked pumps, mixers and valves. The data, i.e. pumped volume, inflow, water level and different kind of pump statistics, is clearly viewed and easily accessible.

In wastewater treatment handling, pump breakdowns could cause severe environmental impact. With the foreseeing alarm distribution, such problems can be predicted and avoided. Flygt AquaView can be viewed in real time with a PC from virtually anywhere, and it can communicate with different protocols.

**Pump drives**

Intelligent pump drives are designed for driving wastewater pumps. Features include smart flow, level control, cleaning
function, sensor-free pump protection, and multi-variable control. Flygt PS 200 for example derates the pump, regulates the speed and helps it run efficiently.