

## **BEFLOW®** AGS

## Continuous Flow Aerobic Granular Sludge Wastewater Treatment

The **BEFLOW**® **AGS** process provides a sustainable and efficient solution for wastewater treatment, combining a reduced footprint with enhanced capacity and efficiency of treatment plants.



The **BEFLOW**® **AGS** wastewater treatment process marks a significant advancement in the field of wastewater treatment.

Suitable for urban wastewater, this innovative aerobic granular sludge technology achieves the highest purification efficiency with compact installations.

The **BEFLOW**® **AGS** process stands out for its ability to handle high flow rates during rain events and its continuous flow design, making it particularly wellsuited for the modernization and expansion of existing treatment facilities, while overcoming the limitations of other granulation processes. With BEFLOW® AGS, Stereau, the exclusive partner of John Cockerill Environment for the commercialization of this process in France and in Switzerland, offers a sustainable and high-performance solution to address the current challenges of urban wastewater treatment plants.

## **APPLICATION AREAS**

- Treatment of urban wastewater in new or existing treatment plants (compliance with environmental standards, capacity expansion).
- Space constraints, limited urban areas.
- Environmental constraints: biological treatment.
- Economic constraints: control of investment and operational costs.

# **BEFLOW®** AGS

## The effective alternative for enhancing the performance and capacity of wastewater treatment plants.

### HOW IT WORKS

The **BEFLOW**® **AGS** Aerobic Granular Sludge technology relies on the formation of dense and compact granular biomass. These granules are naturally formed by the bacteria used, without any fixation support, and are implemented through a dual physical and biological selection.

The densification of flocs allows for treating more water in less time, increases the sedimentation rate of microorganisms, and improves sludge settleability. High biomass concentrations in the biological reactors and the rapid settling of granules significantly reduce the size of the treatment structures while increasing the treatment capacity of existing facilities.

Unlike traditional processes, **BEFLOW® AGS** enables continuous settling and treatment of water, simplifying the operation of treatment plants.



BEFLOW® AGS Granulation features accelerated settleability with an SVI of less than 50 mL/g. It provides excellent retention of suspended solids (SS) and the associated chemical oxygen demand (COD).

#### **ADVANTAGES**

- Increased capacity and efficiency of wastewater treatment.
- Superior purification performance providing advanced treatment of carbon pollution, nitrogen, and phosphorus.
- Adaptability to variations in load and flow.
- Compatible with all sludge recovery processes, applicable to a wide variety of liquid effluents.
- Reduced footprint of installations thanks to a compact design (reduced settling area, less civil engineering).
- Low carbon footprint: 100% biological solution, environmentally friendly, no chemical reagents.
- Reduced energy consumption leading to significant savings.
- Optimization of investment and operational costs.
- High implementation flexibility.
- Simplified operation (continuous flow).

### **CHARACTERISTICS**

Parameters	Units	Refloc® AGS	Activated Sludge
Volumetric load	kg COD m <sup>-3</sup> d <sup>-1</sup>	-	-
Biomass concentration	kg MLVSS m <sup>-3</sup>	7-9	4 - 4.5
Settling velocity (clarifier)	m h <sup>-1</sup>	1 - 1.4	0.6
Biology volume	-	50%	100%
Biological depollution efficiency		75 - 85%	60%

## REFERENCES

Namur Wastewater Treatment Plant (Belgium), Evry-Courcouronnes (Essonne) Pilot Wastewater Treatment Plant

An exclusive commercialization partnership in France and Switzerland with:





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