Headworks® INTERNATIONAL

CASE STUDY: Headworks Integrated Treatment System

Out of Sight, Out of Mind

The world's MBBR/IFAS technology experts at Headworks Bio have developed a smarter way to treat wastewater for reuse. The result is the Headworks Integrated Treatment (HIT™) System: a modular, compact wastewater treatment plant designed for smaller communities and industries. The HIT System provides a complete solution – screening, grit removal, MBBR or IFAS treatment, clarification, tertiary filtration, and disinfection – all with low capital investment and operational costs.

The HIT System requires minimal space, but can treat flows up to 230,000 GPD (870 m^3/day) in a single train. Headworks Bio designs systems to meet a variety of effluent quality requirements. And at any given time, the system can be expanded to meet new discharge requirements or increasing flow rates.

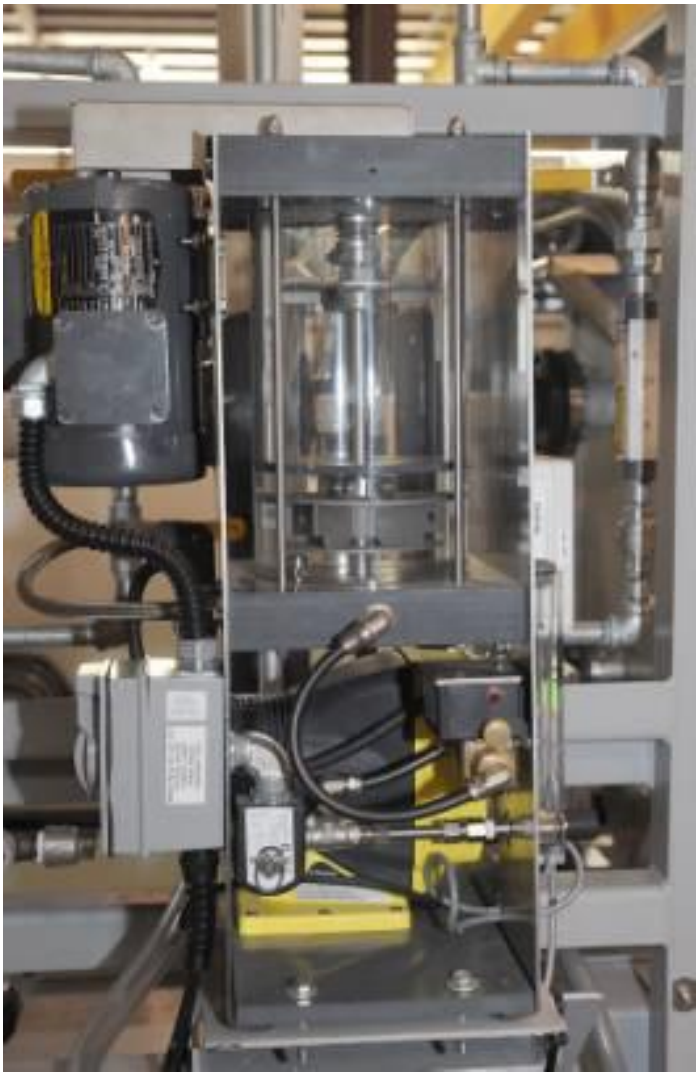
HIT Systems offer many advantages: one of the most important being its ease of operation due to the fixed film MBBR process. Unlike package plant solutions, the self-regulating biofilm HIT system does not require a high level of operator intervention to maintain the process balance. Below are some photos of a HIT system designed to treat up to 15,000 GPD (57 m^3/day) of municipal wastewater. This particular unit was designed for installation in the basement of the facility. With a self-regulating MBBR system in place, "out of sight and out of mind" can be a successful strategy in virtually any location. Have a challenging application that needs a cost-effective, simple to use solution? Give our team a call. We're the experts in Quality That Never Quits™, even when it's out of sight!

This particular system will reduce BOD to 10 mg/L, Ammonia to 2 mg/L, and TSS to 15 mg/L.

QUALITY THAT NEVER QUITS™

The primary screen is the first stage of the process. It removes coarse solids prior to the influent entering the mixing tank. After mixing, BOD reduction and nitrification occur in the reactors.

Effluent screens, or sieves, keep the Headworks Bio ActiveCell media in the reactor, while allowing the effluent to pass through.



The polymer makeup station combines concentrated liquid polymer with recycled effluent for flocculation of the bioreactor effluent.

The DAF separates the solids from the bioreactor effluent.

The peristaltic secondary solids pump transfers the solids removed in the DAF to the bioresidue storage tank.

Final disinfection is accomplished with a chlorine dosing pump.