Biobed® Advanced

- Anaerobic granular technology at the next level
- Reduced investment and operating costs
The challenge in developing the Biobed® Advanced reactor, was combining the excellent performance of the UASB reactor with the cost effectiveness of a high loaded EGSB system.
Combining the best of both

In the Biobed® Advanced technology the stable and reliable high performance of the Biothane UASB system (Upflow Anaerobic Sludge Bed) is combined with the limited space requirement and cost effectiveness of the Biobed® EGSB technology (Expanded Granular Sludge Bed). This novel patented technology thus meets our clients demand for more cost effective wastewater treatment solutions.

Stable and Reliable

For several decades now the granular UASB technology is the state-of-the-art wastewater treatment technology in many industrial sectors. Veolia Water Solution & Technologies’ subsidiary Biothane has proven, with a track record of more than 23 full scale Biobed® Advanced plants, that this high rate technology guarantees a similar granular biomass inventory as the renowned UASB system.
**Biobed® Advanced characteristics**

- Patented technology
- Excellent Biomass inventory
- Superior gas and liquid separation of novel settlers
- Rigid (Stainless) steel settler construction
- Completely closed reactor to minimize emissions
- Settler fits in 40ft sea container to limit transportation costs
- Compact settler reduces reactor height
- Settler standardization reduces the price
- Better performance results in lower operating and post treatment costs

**Biobed® Advanced experience**

- 5 years full scale experience
- 2 pilot plant testing locations
- 23 Full scale reactors treating:
  - Pulp & Paper
  - Chemicals and PTA
  - Food, dairy, sugar, potato
  - Brewery & Distillery

Largest reactor 9000m³ treating 183 tCOD/d
Smallest reactor 440m³ treating 3.5 tCOD/d
From pilot plant testing to full scale

The hydrodynamics and the applicable maximum gas- and liquid-velocities of the new settler design were studied in various scale-model and pilot plant testing. The numerous full scale plants, constructed to date, have confirmed the superior performance and have shown reductions in overall operating costs, including reduced chemical and post-treatment costs.

The new settler

The new compact Biobed® Advanced settler design requires less construction material and fits round and square tanks, with heights of up to 20 meter. A very effective effluent collection system with submersed pipes completes the design. The settler price is reduced by using advanced manufacturing tools.
Veolia Water Solutions & Technologies and its 135 business units, including Biothane, offer turn-key solutions for anaerobic wastewater treatment, but also for process water make-up, biogas utilization, nutrient recovery and water recycling. Operational services and complete outsourcing can also be provided.