

# **ALMA BIO UASB**

### 1-stage anaerobic reactor according to UASB method



Robust 1-stage UASB reactor (Upflow Anaerobic Sludge Blanket) with external biomass recirculation, specially designed for efficient biogas production from organically contaminated wastewater. The individually designed UASB reactors are made of high-quality V4A stainless steel and are available in either a bolted or welded design. The ALMA 3-phase separator, which ensures reliable separation of the biogas produced, is integrated into the head section of the biogas reactor. The separated biogas is temporarily stored in the integrated gas storage tank in the reactor dome. Additional external gas storage is available as an option.

#### **Applications**

- Food industry
- Beverage industry
- Dairy industry

- Paper industry
- Fine chemicals
- Meat and milk substitute production

#### **Specifications**

- Design according to the UASB principle
- 1-stage gas separation
- Integrated gas storage in the reactor dome
- External separation stage for effective biomass retention
- Room load up to 12 kg COD/(m³·day)
- Reactor size from 50 to 3,000 m³

#### **Advantages**

- Robust and durable process technology
- Individual design
- Efficient COD reduction
- Easy maintenance and cleaning
- Large-volume, integrated gas storage
- External biomass circulation for a high biogas yield



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## **Plant engineering**

#### Wastewater and process water

- Treatment for direct and indirect dischargers
- Pre- and post-treatment of wastewater
- Process water Recycling
- Ultrapure water production
- Individual system solutions for all branches of industry

#### **Procedure**

- Biological (aerobic/ anaerobic/ anoxic)
- Precipitation, flocculation and neutralization
- Filtration & reverse osmosis
- Oxidation & hygienization
- Modular systems

Specialized water chemicals from ALMAWATECH for wastewater applications, cooling water circuits, membrane systems and boiler plants.