HUBER Solutions for Biowaste Treatment

- Substrate treatment, coarse material separation and treatment
- Fermentation residue treatment
- Process/wastewater treatment in the field of biowaste treatment

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The situation

The aim of biological waste treatment is to obtain energy from the organic fraction of household waste as well as from organic waste, such as biowaste and food waste.

Substrate treatment

The delivered organic waste is sorted and comminuted to obtain a suspension. The coarse material contained in the suspension are separated by the screen integrated in the comminutor system.

The HUBER Wash Press WAP® (No. 1) recovers the organic matter adhering to the coarse material and returns it to the suspension. In addition, the HUBER Wash Press WAP® compacts the coarse materials, which can thus be disposed of at lower cost.

Contaminant separation

The HUBER Longitudinal Grit Trap ROTAMAT® Ro6 Bio (No. 2) specifically separates settling and floating materials. The result is a contaminant-free process with maximum biogas yield.

The separated material can be directly fed to the HUBER Grit Washing Plant RoSF G4E Bio (No. 3) for further treatment.

Furthermore, the compact HUBER Longitudinal Grit Trap is easy to integrate into the existing pipeline.

Grit treatment

The organic matter adhering to the contaminants is recovered by the HUBER Grit Washing Plant RoSF G4E Bio (No. 3) and is then returned to the biogas production process. The washed materials can be profitably sold for recultivation, for example. In addition, the integrated dewatering unit significantly reduces material transport costs.

Each treatment process produces a characteristic suspension which, in combination with HUBER technology, ensures the optimum yield of biogas or energy.
**Fermentation residue treatment**

**Foreign matter separation**

In some treatment processes, foreign matter is insufficiently separated or deliberately kept in suspension in order to avoid organic losses through separation.

However, legal requirements have to be met so that the fermentation product can be spread on agricultural land, for example. The solution to this is the HUBER Sludge Cleaner STRAINPRESS® (No. 4), which specifically separates foreign materials such as plastic particles and at the same time dewatered them, thus reducing costs.

**Fermentation residue dewatering**

The HUBER Screw Press Q-PRESS® (No. 5) dewatered the fermentation residue and reduces storage and transport costs to a minimum. The fully automatic screw drive is characterised by very low speed, highest energy efficiency and minimum maintenance.

**Process water and wastewater treatment**

At the end of the process, the process and wastewater are treated to clear water by the HUBER Dissolved Air Flotation Plant HDF. This clear water is reused as internal process water to supply the HUBER machines and to produce the biosuspension.

The internal use of clear water reduces operating costs to a minimum, as no cost-intensive fresh water supply is necessary. Furthermore, no additional compressed air is required for the saturation system of the HUBER Dissolved Air Flotation Plant HDF, which has another positive influence on the operating costs of the overall plant.

The flotation sludge from the dissolved air flotation plant contains valuable organic substances that can be reused for biogas production.
Reference installations

More than 60 reference installations in (bio-)waste treatment worldwide:

- HUBER Dissolved Air Flotation HDF at a food waste treatment plant in Spain.
- HUBER Wash Press WAP® at an English biowaste treatment plant.
- HUBER Grit Washing Plant RoSF G4E Bio at a German biowaste treatment plant.
- HUBER Sludge Cleaner STRAINPRESS® integrated into the pipeline (Great Britain).
- Separated and dewatered foreign matter from the HUBER STRAINPRESS® at a biological waste treatment plant in Germany.