

Product sheet: HECLA® Setores 1.000

With HECLA® Setores integrated steam drying and pyrolysis technology:

- You get easy “no-touch” fully automated operation
- You reduce pollution and health risks
- You eliminate greenhouse gas emissions and capture CO₂
- You recover energy and recirculate nutrients
- You reduce costs and generate revenue

Key application area:

Municipal wastewater sludge.

Reference cases:

The AquaGreen technology is developed and patented jointly with the Technical University of Denmark. Two Danish municipal utility companies have bought the HECLA® Setores 1.000 system.

All-in-One process:

- Optimal energy utilization and recovery due to integration of drying and pyrolysis
- Super-heated steam drying for 2 hours at 200°C
- Slow pyrolysis for 20 minutes at 650°C
- Fully automated, continuous process

Manpower and operation:

- Easy operation - minimal service required
- 7.500 operation hours/year

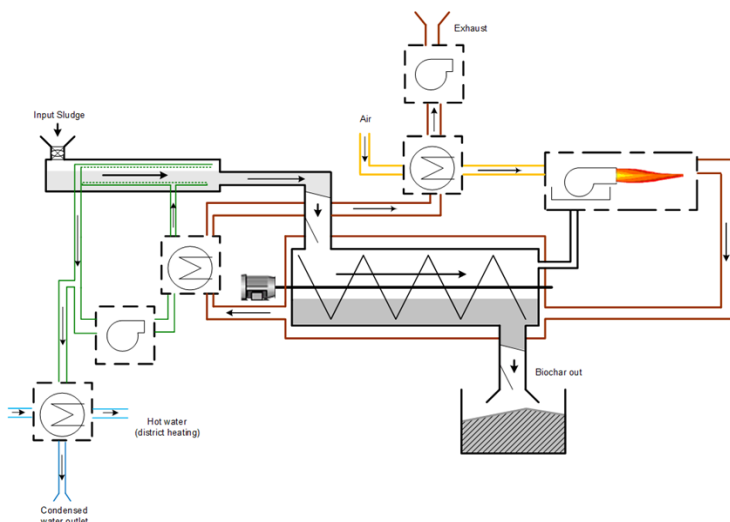


Input:

- Sludge is preferably dewatered to minimum 23% dry matter to obtain energy balance
- After anaerobic digestion, the sludge dry matter is preferably >27%

Output:

- PAH-free biochar complying with Danish "waste to soil" limit values
- Hot water (70-80°C) to be used for local or district heating



Capacity and size:

HECLA® Setores 1.000 treats ca. 1.000 tonnes of sludge per year (on dry matter basis). The largest single component measures approx. 3.5 x 10,5 m. The total size is 15 x 12 x 4.3 m (L x W x H) excluding feeding and receiving systems. The total weight is 33 tonnes.

Key parameters (example):

The system's capacity depends on the calorific value and dry matter content of the biomass.

Thermal drying	350	kW
Burner	500	kW
Feed rate, wet biomass	500	kg/h
Produced biochar	50	kg/h
Condensation	500	l/h
Cooling water	7.400	l/h

Installation and access conditions:

The process plant must be installed in a dry, frost-free, and closed room with fresh air ventilation, waterproof flooring with a load capacity of at least 1.000 kg/m², and floor drains. The control cabinet must either be installed in a separate room or have independent ventilation for fresh air.

Ensure a free working space of approximately two meters around the entire facility. There must be access roads that allow the components of the system to be transported and mounted on the system.

Automation and operational monitoring:

The process plant is automated with PLC control mounted in an independent control cabinet, with frequency converters on all motor components. Via an Internet connection, the system is monitored by AquaGreen with collection of all relevant sensor data and operating status parameters.

All operating data can also be made available via an interface to SCADA (Supervisory Control And Data Acquisition) systems.

AquaGreen

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