

# CAMBI SolidStream®

thermal hydrolysis for existing anaerobic digestion plants



## SolidStream®

**SolidStream® is a novel process technology and service, building on Cambi's well-known, compact, modular thermal hydrolysis process (THP).**

Developed in 2013, it is tailored to dramatically reduce sludge handling and disposal costs for wastewater treatment plants (WWTPs) with sufficient digester capacity at existing anaerobic digestion plants.

Laboratory testing of digested sludge samples from 24 different WWTPs showed reduction in the final cake volume of 50% to 70%, compared to conventional anaerobic digestion. Test results are confirmed and even surpassed in full-scale demonstration at Geiselbullach WWTP (Amperverband) near Munich, which operates successfully since 2015.

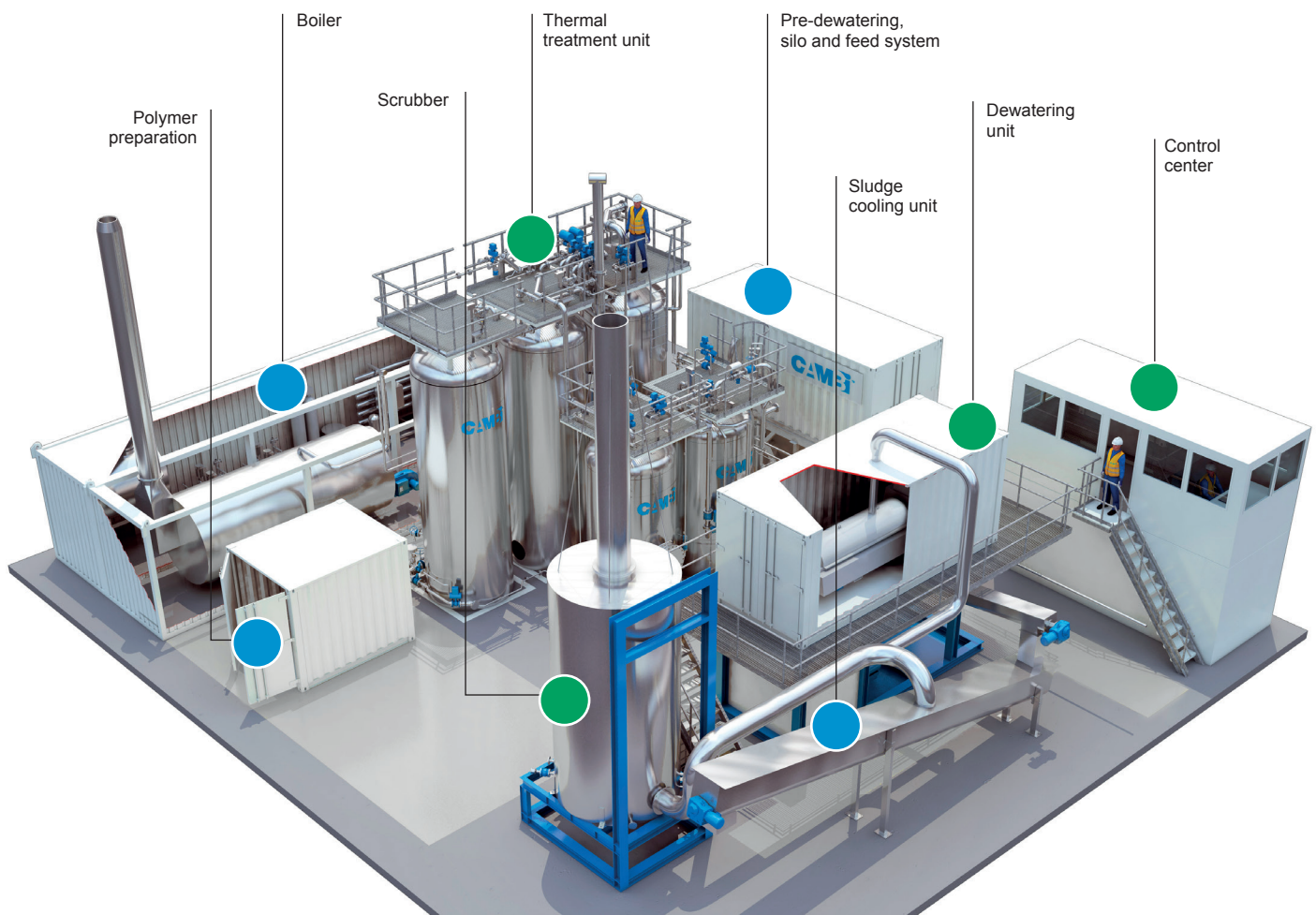
SolidStream® achieves higher rates of transformation of the volatile solids into biogas and better dewatering compared to conventional anaerobic digestion. When combined with electricity production, heat from cogeneration will provide both enough steam for SolidStream® and heat for digestion. The process increases net energy production, thanks to innovative energy flows and recycling at all stages.

The end product is a low-odour, pathogen-free, high quality organic fertiliser, which qualifies for Enhanced Treated Product status. Alternatively, as high-calorific sludge, it is well suited for mono-incineration.

	ENERGY EFFICIENT & PASTEURIZATION	HIGHER BIOGAS PRODUCTION	LOW VOLUME OF HIGH QUALITY BIOSOLIDS
Conventional			
SolidStream®			

- building on Cambi's long experience with process optimisation
- heat is recycled in a closed process and to the digesters
- up to 50% higher biogas production
- stable and reliable process with simple operation and maintenance
- 50% to 70% total mass reduction;
- stable, easy to handle end-product with up to 40-60% DS;
- less GHG emissions

	Conventional Anaerobic Digestion	Cambi SolidStream®
Sludge feed	4,700 tDS/year (62% primary), with 83% VS	
Volatile solids reduction	52%	75%
Biogas production	baseline	43% over baseline
Heat retention time	25 days	19 days
Final cake mass	12,500 t/year	4,100 t/year
Final cake DS content	20%	38%



● SolidStream®    ● Auxiliary equipment

*Low footprint (ca. 20x20 m). Layout can be configured to any WWTP*

Digested and dewatered sewage sludge is subjected to high temperature and pressure during thermal hydrolysis, then processed in a final dewatering stage. Hot centrate from final dewatering, rich in soluble COD, is sent back to the digester, recycling heat and increasing biogas production.

SolidStream® is modular and easy to integrate with existing processes and plant layouts.

## ABOUT CAMBI

Cambi is the global market leader in thermal hydrolysis solutions for municipal sewage sludge and biowaste, with more than 20 years of operational experience and 50 successful projects delivered in 20 countries over five continents.

Together with its daughter company Høst, Cambi is offering SolidStream® as an attractive service, including the option to take care of biosolids disposal. As a process, SolidStream® is expected to have an appealing payback time.