



SOLUTIONS FOR CO₂-NEUTRAL ENERGY



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Pretreatment of agricultural residues

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DiBiCoo Web Seminar

In our biogas plant we produce
12.000 kWh daily since 2004



We make energy from straw and manure



Our input materials are (DM)

annual feeding amount 3.400t DM/a

- 67% corn straw
- 12% cow and horse manure
- 9% summer and winter catch crops
- 7% cereal, rape and soy straw
- 5% landscape material and grass
- 2000m³ pig slurry



The pretreatment steps for agricultural residues

- Harvest



- Storage



- Treatment before digester



Corn straw harvest with BioChipper



Corn straw harvest with BioChipper



Straw can be stored in the silo



... or over 85% DM in bale



Mixing with wet material like...

Summer crops or



landscape material, beet pulp
etc have a positive effect

Treatment before digester

- Dosing
- Shredding
- Solid feeding
- Liquid feeding



Requirements for the feeding line



- Constant even dosing
- Insensitivity to foreign objects (stones, steel)
- Increase surface
- Communication between the technical components
- No bridge building
- No blockages
- Low wear
- Low power consumption
- CE certification and risk analysis for the whole feeding line

Liquid feeding line



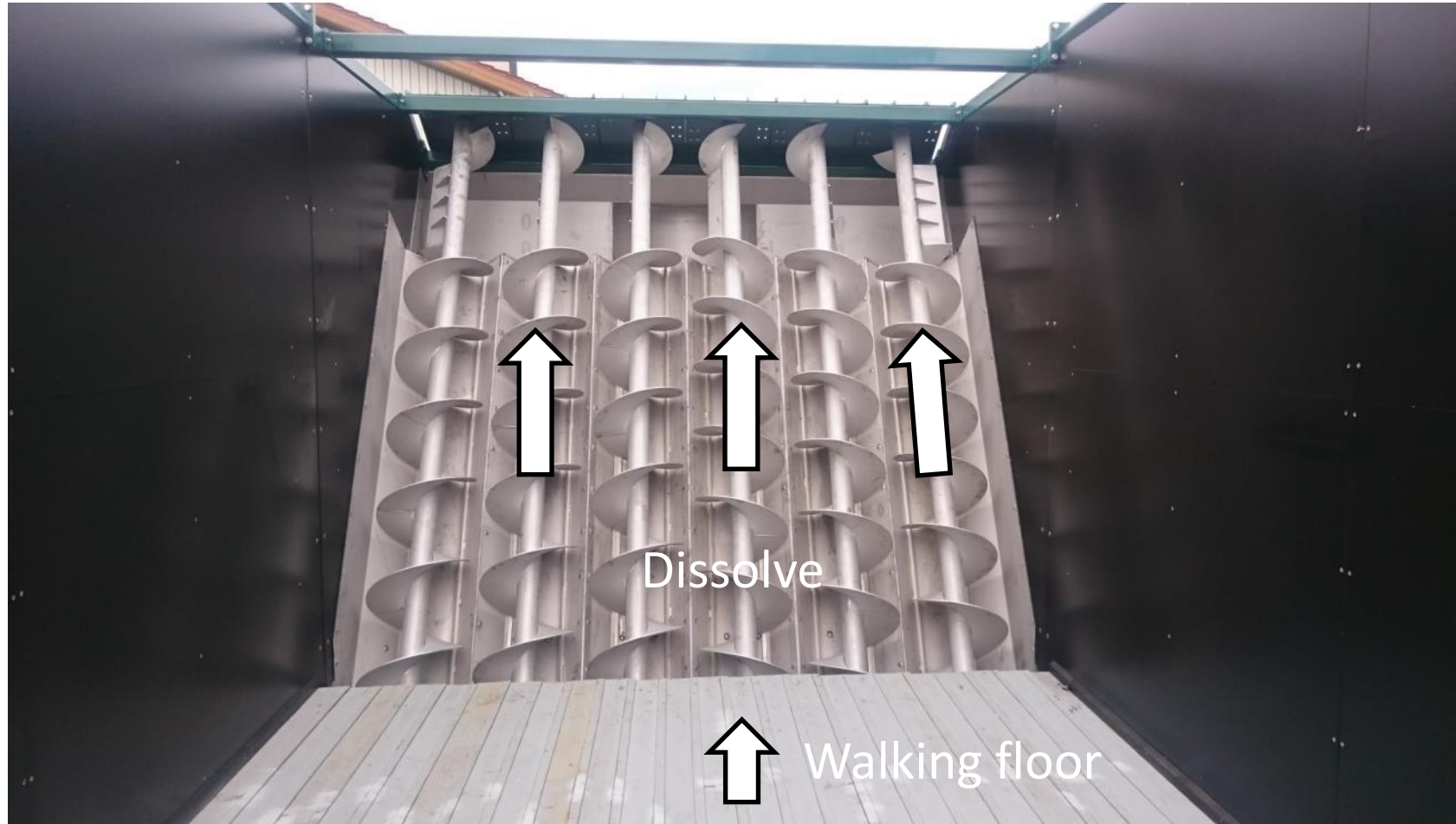
1. Store

Storage with a volume from 5 m³ up to 400 m³



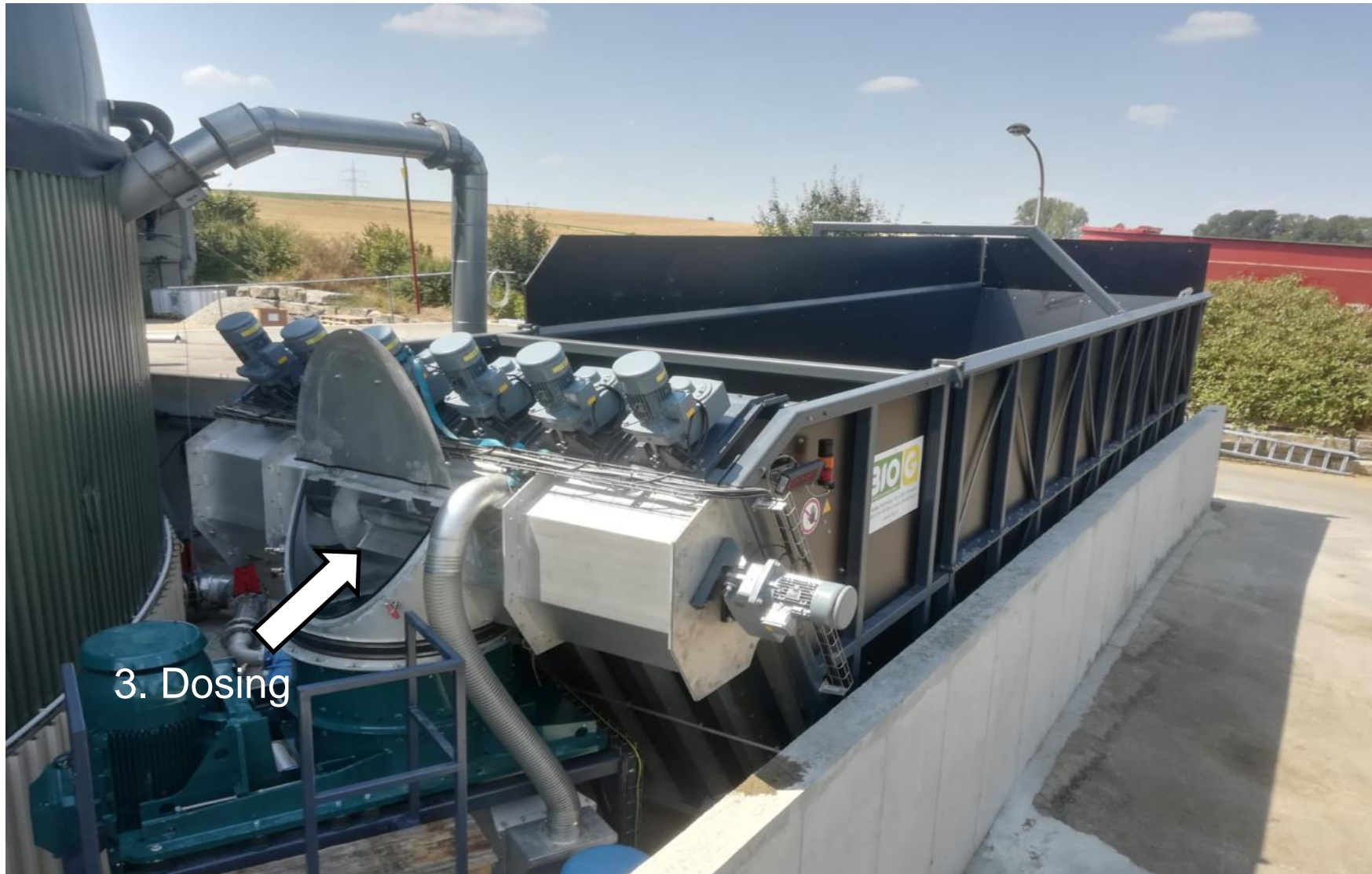
2. Dissolve

The dissolving augers loosen the straw and manure that's pushed on the front by walking floor



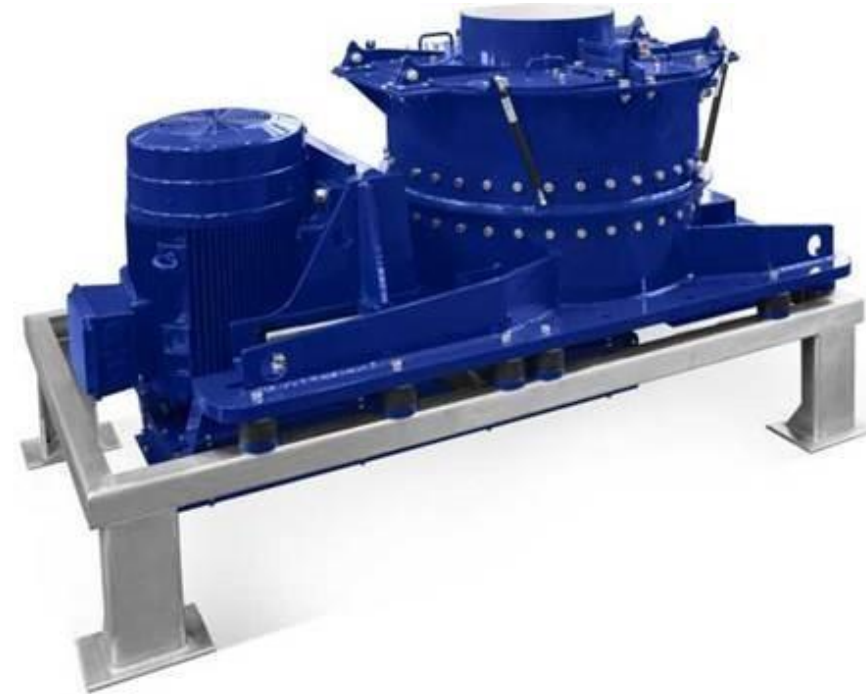
3. Dosing

The dosing screws dose the material evenly to the fiberizing



4. Fraying - fiberizing

The material is frayed with fiberizing hammers...



BioG fraying machines from 45 kW until 132 kW

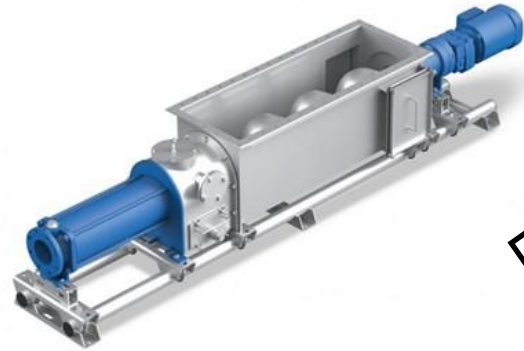
4. Fraying

... to increase the contact surface for the bacteria.



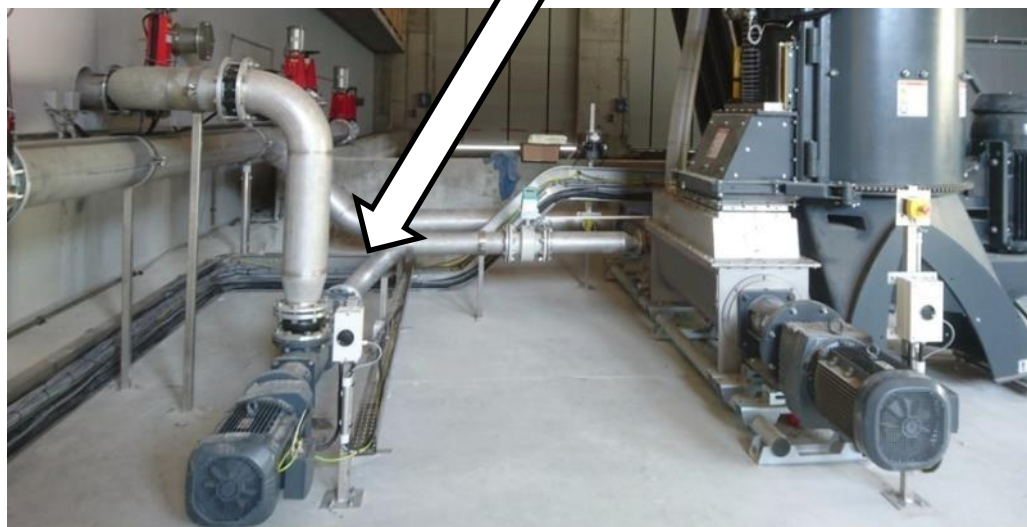
5. Mix pump

Mixes the solid material after shredding with liquid from the digester and pump this mixture back to the digester.

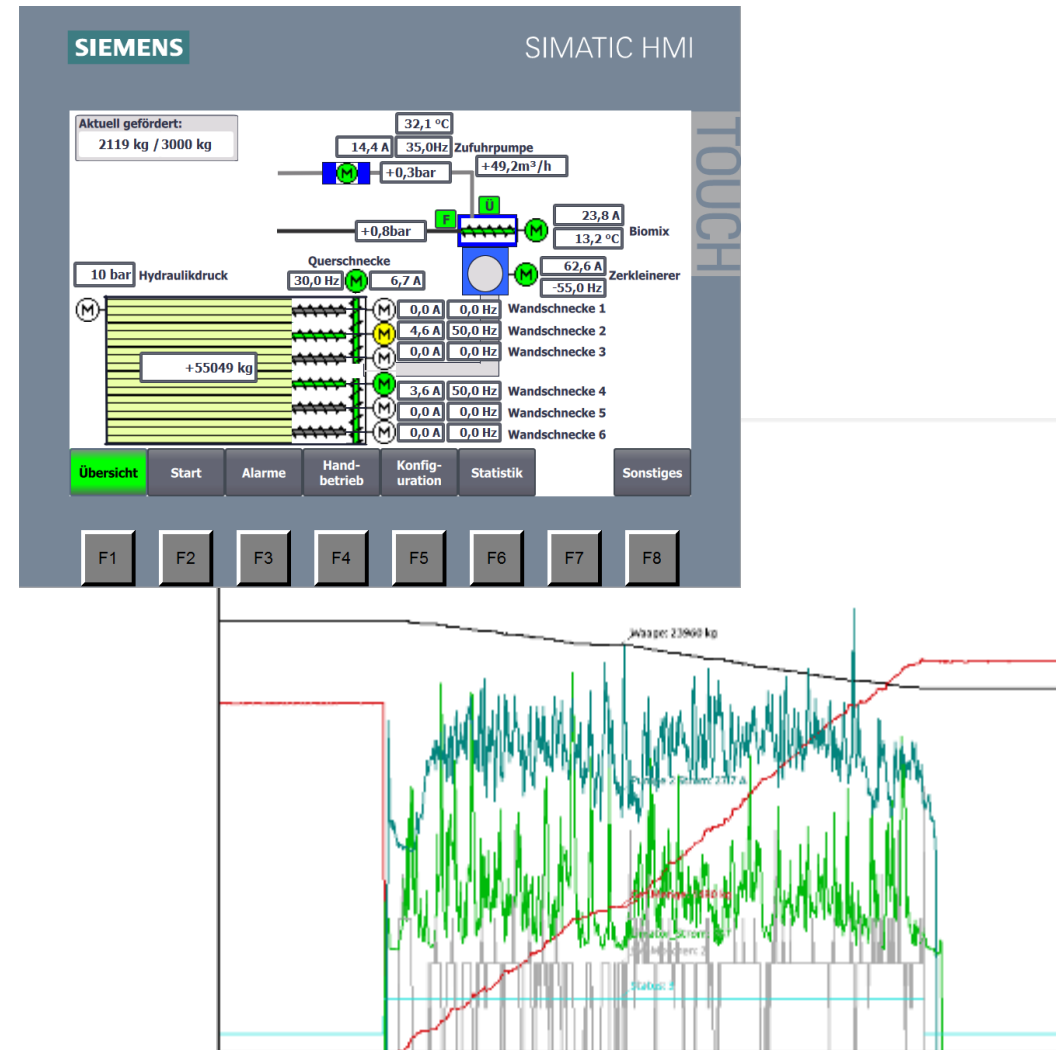


6. Liquid feeding pump

Doses liquid from the digester into the mix pump



- Analysing process data for optimization
- Automatic adjustment of conveying velocity and optimization of power consumption
- Automatic adjustment of the parameters to the different materials.



Thank you for your attention



BioG – solutions for green energy