

The logo for MAVEG features the word "MAVEG" in a bold, white, sans-serif font. The letters are positioned in front of a semi-transparent, light blue globe that shows the continents of North and South America. The globe is centered behind the text, with the letters partially overlapping it.

MAVEG

Repowering of biogas-plants – the Gorator® for increased gas efficiency

GIZ / FECC Training V on Biogas Technology 2011

Maveg – a short company profile

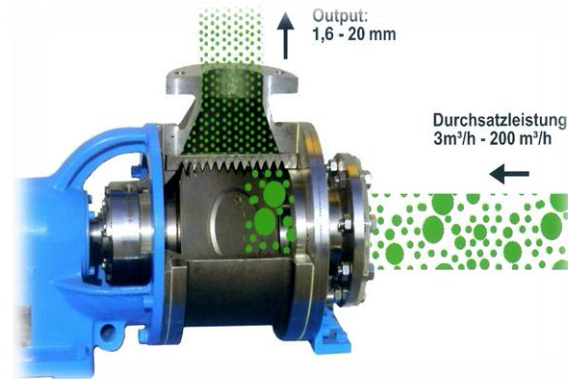
- Established in 1984
- General Manager: Mr. Wolfgang Bürkle
- Location: Sprockhövel in North Western Germany
- Focus: Engineering and Sales Company
- Range: standard and special machines for rubber, plastic and textile industry
- China Range: wet processing crusher (Gorator®), Gorator® for Biogas and waste water treatment



**Typical Biogas-
plant in Germany**

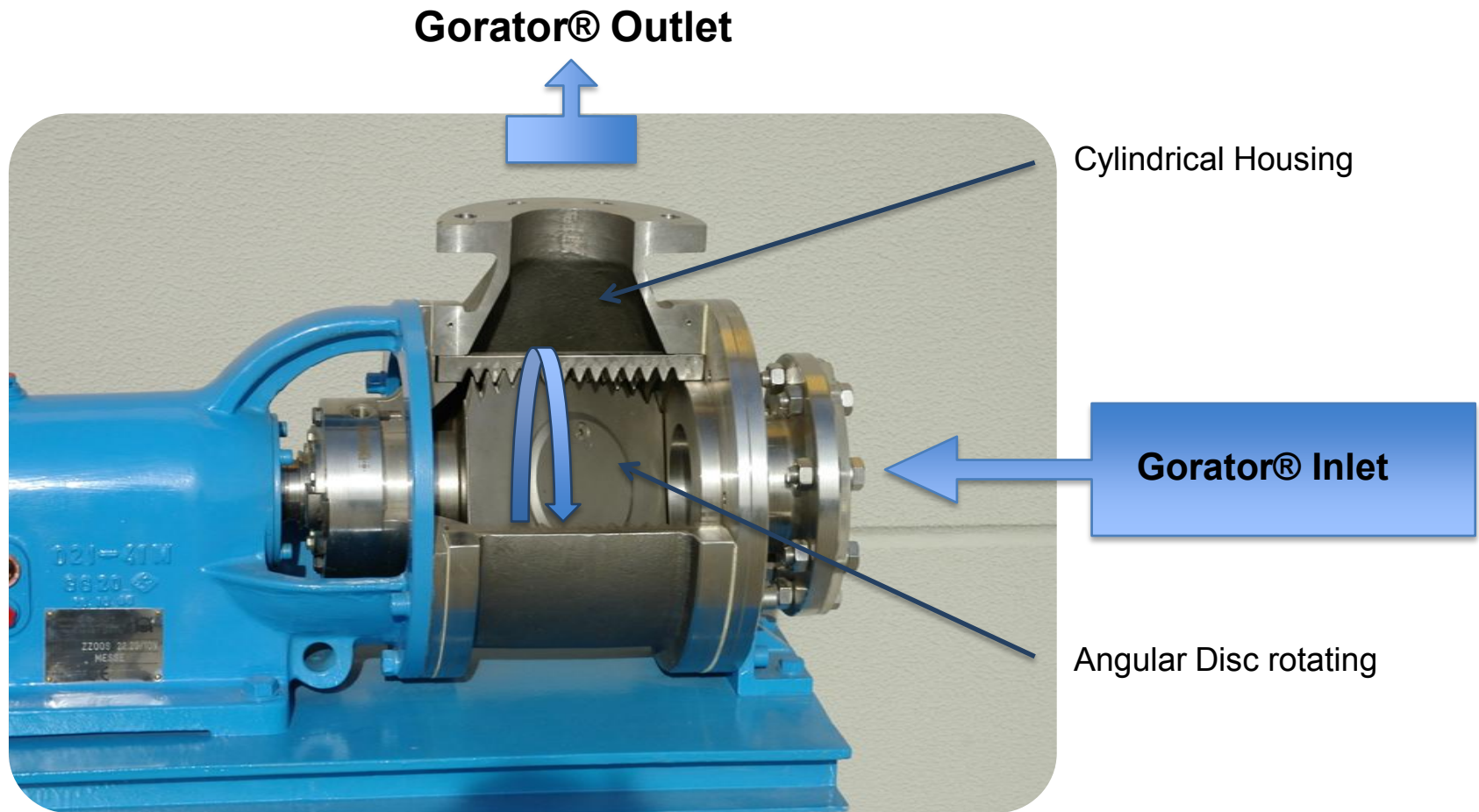


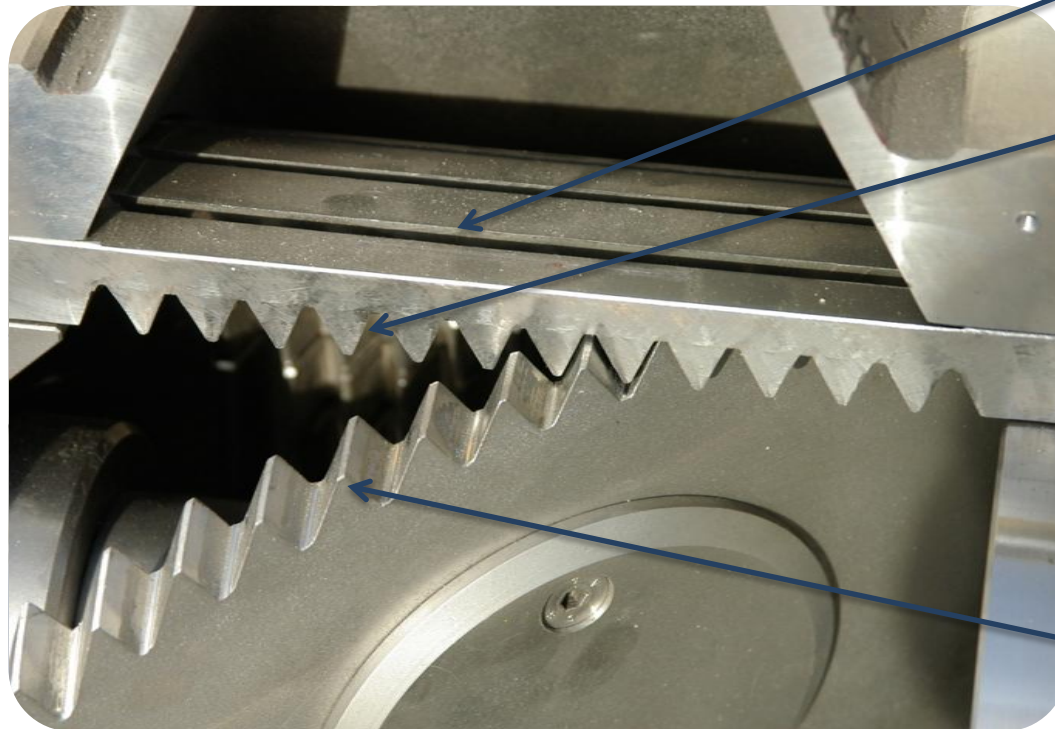
**Gorator® installation in
Biogas plant
Samswegen / Germany**



GORATOR® - the basic principle

The GORATOR® can crush, defibrate, grind, mix, homogenize and feed. In short, it processes your medium using a variety of physical and mechanical methods, whereas at least two phases in the treatment process must be available. An angular disk rotates in a cylindrical housing and the resulting movement causes both an acceleration of the medium in the axial and in the radial direction. These overlaying movements of the product generate thrust and shear stress, which depending on the medium and its viscosity lead to an intensive mixing and conveyance. Solids are transported by force into the radial and axial groovings and crushed by the teething geometry of the rotor disc. Through the rotation of the rotor disc the product receives centrifugal force, similar to a centrifugal pump, and is finally transported through the pressure outlet. The product first has to pass the so called stator. The stator consists of slot segments and bushing segments. These segments guarantee a previously defined maximum particle size of the GORATOR® discharge.





Screen segment

Groovings

Gorator®

Teeth Geometry

**Gorator® at reduced
demonstrationspeed (real
rotorspeed 1500 1/min)**

Mechanical seal



Quenchsystem for
mechanical seal

Burst Coupling

Drive (22 to 30 KW)

Base Plate



Results on different inputs:

- **Maize silage**



Results on different inputs:

- **Gras**



Results on different inputs:

- **Pure Maize particles**

Measurable effects of Gorator® on Biogas-plant Samswegen Germany (0,8 MW) power



- ✓ 1000 KWh per day increase by total capacity of 15500 KWh per day with Gorator® (+ 7%)
- ✓ Reduced power consumption of the agitators
- ✓ 50% increase of the possible volume charge (kg oTs/m³*d)
- ✓ 10% drop of the feeding times



MAVEG

**Maveg – we have the answers for your
future demands**

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