Biomethane generation based on pressure swing adsorption – BIOSWING

Mahler AGS biogas upgrading plants are based on pressure swing adsorption technology for capacities from about 500 to 5000 Nm³/h.

BIOSWING PSA units are designed for the biomethane generation from biogas.

The pressure swing adsorption (PSA) technology employs the basic principle of gas separation at ambient temperatures by using carbon molecular sieve (CMS; a material that adsorbs carbon dioxide to leave a rich stream of biomethane).

**Plant features of the BIOSWING biomethane generation plant**

- High methane recovery and product purity
- Low energy demand
- Fast start-up, fully automatic and unattended operation
- Automatic adjustment to biogas quality
- Remote control
- Containerized units
- High availability and reliability
- Design for long lifetime

**Plant data**

- **Feedstock:** Biogas / landfill gas
- **Upgrading capacity:** 500 to 5000 Nm³/h
- **CH4 recovery rate:** up to 98%
- **Product purity:** > 96 vol.-% CH4
- **Pressure*: 4 – 7 bar(abs)

* at exit biomethane generation plant; higher pressures on demand.

**Additional/Optional features for BIOSWING biomethane generation plants**

Subsequent oxygen removal (DEOXO-unit) to meet EASEE requirements can be offered.