

VALENTIN - the best solution for organic waste

Be in control of your organic waste and reduce your CO₂ footprint at the same time. Suitable for all sorts of pumpable organic waste from agriculture and industry.

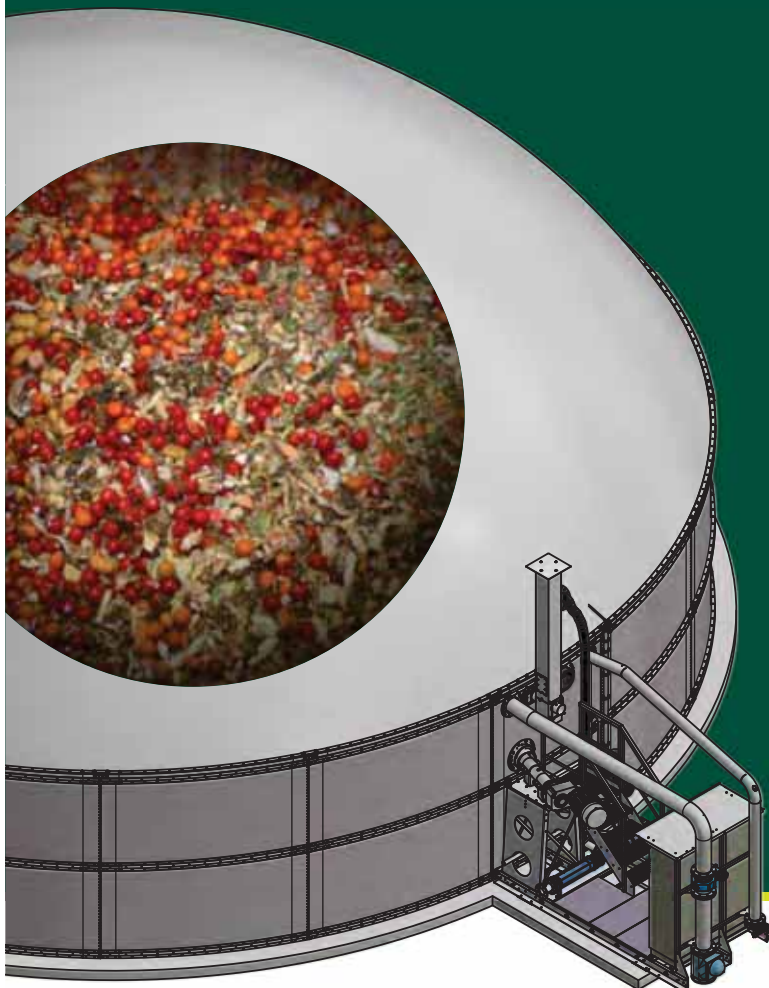
Eliminate land fill costs
when organic waste is treated on site

Be compliant
with EPA regulations

Generate 60 to 150 kWel
depending of substrate used

Lower the CO₂ footprint
of your company

Easy and quickly to construct
in 2 weeks due to pre-fabricated modules





VALENTIN – Quality, automated and profitable

The VALENTIN biogas plant offers the newest digester size in the PlanET fleet. Its small, modular design is specifically targeted towards farms that have not been able to implement larger digester projects. Like all other PlanET digesters, the VALENTIN benefits from our 20 years of experience designing and building best-in-class digesters. This plant uses the same, trusted components used in the 500+ digesters PlanET has built, however this design allows for quick and easy construction on site. The organic materials fed into the digester are converted into high quality biogas which can be used to run a combined heat and power unit (CHP) to produce electricity and heat or strictly as a boiler fuel substitute for heat generation.

The benefits for owners and operators of the VALENTIN include:

- Low maintenance costs and long service life around 20 years
- Cost-efficient system with high value for money
- Reduction of greenhouse gas emissions through controlled digestion and utilization of the biogas
- Fully automated operation, therefore very low daily workload and manpower required
- Can be operated in „Island Mode“, independent from public grid, to cover your daily demand
- Big gas storage volume for high flexibility during operation

Datasheet of the VALENTIN

VALENTIN 900

Fermentation volume approx.	867 m ³
Total volume approx.	1,010 m ³
Diameter VALENTIN inside	20.3 m
Wall height	3.12 m
Total height approx.	8.1 m
Diameter base plate	21.5 m
Substrate processing quantity max. ^{*1}	30 m ³ /d
	11,000 m ³ /a
Recommended power range ^{*2}	60 kW - 150 kW
Total gas storage volume approx.	1,050 m ³
Gas storage volume sufficient for approx. ^{*3}	12 h - 27 h
Mixer running time/h approx. ^{*2}	8 to 15 Min



On-site base plate

Equipment

Non- return valve	✓
Flow meter	✓
Digestate pump	✓
Gas extraction pipe DN 150	✓
Stainless steel heating pipe	✓
Electrical heater 3 x 12kW	✓
Air- supported roof	✓
Integrated gas- storage	✓
Durable shaft mixer 15kW	✓
Sampling valve	✓
Insulated digester wall construction	✓
Control cabinet	✓
CPU control system	✓
Biological desulphurization system	✓



1. Day



2. Day



3. Day

Safety engineering

Tank level measurement	✓
Gas underpressure switch	✓
Gas level measurement	✓
Remote dail-in	✓
Inspection window	✓

Additional components

Manure feed-in pump	●
Manure feed-in pipe DN 200	●
Digestate extraction pipe DN 80	●
Condensate trap	●
Activated carbon filter	●
Gas analyzer	●
CHP	●
Gas flare	●



7. Day

Pipeline construction completed and ready for operation

^{*1} for 30 days retention time | ^{*2} substrate dependent | ^{*3} performance dependent

The perfect partners

Bio Bowser Renewable Technologies Pty Ltd.

The increasing amount of organic waste in a landfill is a big environmental problem with negative impacts to businesses and households worldwide. The rotting waste releases significant amounts of methane - a greenhouse gas 20 times more potent than carbon dioxide- straight into the atmosphere. However, when captured, methane can be used to generate energy that can help power your business operations while helping you maximise the value of your own organic waste.

BioBowser Renewable Technologies offers an innovative solution to the management of organic waste that makes

business sense while helping the environment. Whether you own a small restaurant or cafe and are concerned with the increasing landfill levy and tighter governmental regulations of waste treatment in your area, or you operate a large canteen with a considerable amount of organic waste per day. You will find our units can be tailored to your particular needs and your waste profile. Suitable waste streams include animal manures, effluent, abattoir residues or food waste from processing facilities such as kitchens, canteens, holiday resorts, mining camps and aged care facilities.

PlanET Biogas – experts in biogas and biomethane solutions for more 21 years

PlanET Biogas has been a pioneer in the field of anaerobic digestion for over 21 years. As creator of best in class biogas plants, we understand the optimal interaction of individual components to achieve economic success. Our extensive competence in planning, engineering, permitting, plant construction, commissioning, technical and biological service sets PlanET apart as an integrated biogas technology provider. With over 500 plants installed around the globe, PlanET is the experienced choice for your biogas development.

- 500 biogas plants worldwide
- more than 220 employees
- 5 international locations
- Plants from 40 kW to over 4 MW

- **Industrial and agricultural customers**
- **Highest quality** in construction and documentation
- **Numerous utility model-protected technical solutions**
- **Biological support** helping to provide best in class biogas production
- **Continuous further development of our technical solutions** in our own research and development department