

## Biogas plant „Zeltweg“ Thöni industrial firms limited liability company

This biogas plant was built for the military airfield of the federal armed forces in Zeltweg. The investments for the plant management was transferred to a contractor. Receiving a remuneration he delivers the heat for the army. The federal armed forces make the necessary feedstock (grass) available to the operator of the biogas plant. The digestate is used as a fertilizer on the green space of the military field. The green electricity, which is produced of the plant, is supplied in the local power grid.

The biogas plant works with a two- stage process with one main digester and a second digester, which are made of concrete. The main digester has a concrete ceiling and the second one has a plastic membrane as a gasholder. Inside of the main digester are two paddle agitators and one submersible agitator. In the second digester are one paddle agitator and one submersible agitator situated.


Maize, grass silage and whey is the feedstock of the biogas plant Zeltweg. The infeed of the solids is done over a separated hydraulic shear cotter floor, which transports the feedstock from the storage to a conveyor duct. It is possible to dose the feed rate exactly, cause of the installed weighing machine. The whey is pumped through a slurry store, which has an especial coating. Furthermore there is an external biofilter, which should avoid problems with the odour.

The total residence time is 80 days.



After a separation the liquid residue is transported to three lagoons, which have a total capacity of 2500 m<sup>3</sup>. The solids are used in the agriculture and is picked up daily.

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# Biogas Regions Shining Example



## key data

Start of Operation .....	<b>2005</b>
Type of corporation .....	<b>Ltd. company</b>
Amount of gas produced .....	<b>2 150 000 m<sup>3</sup> per year</b>
Investment costs .....	<b>2 300 000 €</b>

## feedstock

Grass silage .....	<b>8 000 tons</b> per year
Maize .....	<b>4 000 tons</b> per year



## production data

Available area for the output of the biogas fertilizer .....	<b>250 ha</b>
Thermal power rating of the gas engine .....	<b>555 kW</b>
Generated thermal energy .....	<b>4 440 000 kWh</b> per year
Utilisation of heat .....	<b>federal armed forces</b>
Electric power rating of the gas engine .....	<b>500 kW</b>
Generated electric energy .....	<b>4 000,000 kWh</b> per year
Power consumption (electricity) of the plant itself .....	<b>400 000 kWh</b> per year

## technical plant description

Digester .....	<b>1 500 m<sup>3</sup></b>
Second digester .....	<b>1 500 m<sup>3</sup></b>
Gas storage tank .....	<b>1 000 m<sup>3</sup></b>
Residence time in the digesters .....	<b>50 days</b>
Temperature of the anaerobic digestion (operational) .....	<b>40°C</b>
Average expenditure of human labour .....	<b>6 per day</b>

For further Information, please visit [the plant's webpage](#) or contact:



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