

CHP UNITS IN WASTEWATER TREATMENT PLANTS

Wastewater treatment plants are suitable places for the introduction of cogeneration technology. Sewage gas that is generated in a wastewater treatment plant is purified to biogas and it is used as a fuel for CHP unit. The generated heat is used to heat the adjacent buildings and the electrical power is either utilised for internal needs of the wastewater treatment plant or it can be sold into the grid.

WASTEWATER TREATMENT PLANT IN MORAG, POLAND



TEDOM Poland commissioned a containerized CHP unit Cento T100 at the wastewater treatment plant in Morag, Poland in June 2015. The CHP unit covers the energy needs of the WWTP and in case of distribution network failure, it can also serve as an emergency source of electricity and heat to maintain the operability of the wastewater treatment plant technology.

The modernization and expansion of the WWTP were financed with the European Union subsidies under the Infrastructure and Environment Operational Programme.

Basic Information on the Installed Unit

CHP Unit type	Cento T100
Number of units	1
Fuel	Sewage Gas
Electrical output	106 kW
Heat output	143 kW
Year of installation	2015
Annual power production	690 MW
Place of installation	Morag, Poland

Benefits of the cogeneration unit

The electrical output covers fully the consumption of the waste water treatment plant's technology. The interesting point is utilization of the heat energy then. The heat energy is utilized partly to heat the warm water, central heating system, and WWTP's technological equipment. However, this heat energy is used primarily for drying and granulating the generated sludge that is sold at the end of the technology in a form of small pellets to the local district heating company. Burning of the pellets closes the cycle of disposing of the hazardous substances from the waste water treatment plant that also find their final energy utilization.

SELECTED REFERENCES FROM WASTEWATER TREATMENT PLANTS



Ostrava, Czech Republic

CHP unit type: 2x Quanto D400
Electrical output: 800 kW
Year of installation: 2011



Nové Město nad Váhom, Slovakia

CHP unit type: 2x Micro T30
Electrical output: 60 kW
Year of installation: 2014



L'Ehn, Meistratzheim, France

CHP unit type: 2x Cento T100
Electrical output: 200 kW
Year of installation: 2015



Uffenheim, Germany

CHP unit type: Micro T30
Electrical output: 30 kW
Year of installation: 2015

170+ other references:

- Micro T30, Vence, FR
- Micro T30, Diessenhofen, CH
- Micro T30, Krenstetten, AT
- Micro T30, Taufkirchen, DE
- 2x Micro T30, Eschenbach, CH
- Cento T120, Hodonín, CZ
- Cento L155, Dannenberg, DE
- Cento T80, Zlaté Moravce, SK
- 2x Cento T200, Shumen, BG
- 2x Cento T200, Isparta, TR
- 2x Cento T200, Ravda, BG
- 2x Cento T200, Burgebrach, DE
- 2x Cento T100, Meistratzheim, FR
- 2x Cento T200, Bytom, PL