

METENER

Introduction to Metener Ltd and products



Member of
**CLEANTECH
FINLAND**

Leverage from
the EU
2014–2020

METENER

About Metener

Metener Ltd is a Finnish biogas engineering company, founded by Mr. Erkki Kalmari in the year 2001. It is located in Laukaa, central Finland.

Mr. Kalmari built his first biogas plant in 1998 and first public biogas filling station in Finland in the year 2004.



Products



Biogas production (wet and dry method) technology.

Biogas upgrading unit (needed when vehicle fuel, bottled gas or state grid injection is applied)

Hydraulic gas compressing unit

Coming products:

- CO₂ recovery system integrated to upgrading unit

- Light biogas upgrading unit, which purifies biogas and increases methane content to 70-80% (useful with local gas grids and CHP)

References

Metener biogas plants with Metener upgrading unit

| | Commissioned | Capacity m3 raw gas / h | Capacity kW | Biomass |
|-------------------------|--------------|----------------------------|-------------|--|
| Leppävesi | 2002 | 30 | 180 kW | Sludge, food industry waste |
| Jyväskylä | 2003 | 10 | 60 kW | Metener delivered upgrading unit |
| China | 2009 | 40 | 240 kW | Sludge |
| United Kingdom | 2013 | 10 | 60 kW | Metener delivered upgrading unit |
| Joutsa | 2014 | 60 | 360 kW | Sludge, food industry waste, biowaste |
| Leppävesi (new unit) | 2014 | 60 | 360 kW | Sludge, food industry waste |
| Australia | 2017 | 10 | 60 kW | Metener delivered upgrading unit |
| Hyvinkää | 2018 | 60 | 360 kW | Dry fermentation: Grass, horse and chicken manure |
| China | 2019 | 60 | 360 kW | Dry fermentation: Corn straw |

References

Metener biogas plants with CHP unit

| | Commissioned | kWe | Biomass |
|--------------------|--------------|------|---|
| Leppävesi | 1998 | 50 | Sludge, food industry waste |
| Halsua | 2003 | 30 | Sludge, food industry waste |
| Maaninka | 2009 | 30 | Sludge, grass |
| Juva | 2010 | 250 | Sludge, dry manures, food industry waste |
| Tuorla | 2011 | 50 | Sludge, grass, plant biomass from sea bay |
| Huittinen | 2012 | 150 | Sludge, dry manure, food industry waste |
| Leppävesi, new CHP | 2013 | 50 | Sludge, food industry waste, grass |
| Kouvola | 2017 | 3x60 | Dry Fermentation: Tree leaves, wood biomass, garden waste |

Palopuro Dry Fermentation Project

(Awarded by Finnish
Environmental and Energy
Minister Kimmo
Tiilikainen)



Reference 2018-2019: Dry fermentation plant and filling station to Hyvinkää Finland (Palopuro project).



Palopuro dry fermentation plant

Biomasses: grass, horse manure, chicken manure,
3300 tons/year

Annual production 2500
MWh



Harvest



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Collection & shredding



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Fermented residue



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Fertilizer application



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Reference example:

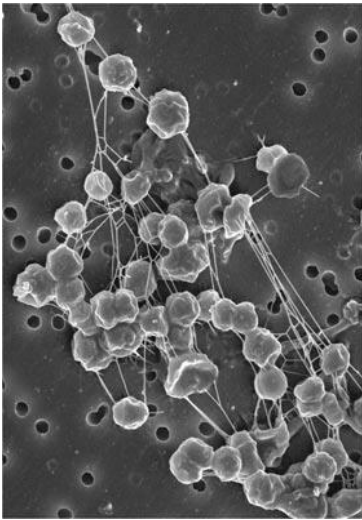
Wet fermentation plant at Huittinen

Biomasses: Pig slurry, Grass,
Food industry waste

150 kW electricity, 200 kW heat for the farm use



Metener strenght: combined technology and biology knowhow, process understanding, high automation level, long history in R&D.



Thank you

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