

Energy-independent with combined heat and power

ECONIMO 5000 | > 5 Megawatt



The ECONIMO 5000 is a flexible system for the on-demand, off-grid, CO₂-neutral and environmentally friendly generation of electricity, heat, cooling and steam. The mini power plant delivers 1.6 MW of electrical and 4.2 MW of thermal power using liquid methanol. Choose your ideal plan from our purchase, rental and leasing options.

Thanks to advanced methanol technology, the ECONIMO 5000 is a compelling solution for those who want to minimise their grid dependency and carbon footprint to promote a greener future.

- ✓ CO₂-neutral thermal and electrical energy with renewable Methanol*
- ✓ Energy availability at the push of a button
- ✓ No fine particles

Application areas



Industrial heat

Production of hot water, steam and thermal oil. Ideal substitute for existing gas boilers.



District heating & utilities

Heat and power as base load, peak load or reserve load.



Commercial buildings and holiday resorts

Ensuring energy grid independence and back-up power for distribution centers, industrial plants, rooms and pools.



Maritime and island operations

An ideal solution for maritime and island operations where exhaust and emission regulations must be met. Its compact size allows for on-board placement, making it a convenient and practical solution for clean and sustainable energy production.

Operational characteristics

- Overall efficiency up to 90%
- Designed for indoor or outdoor use
- Remote monitoring with IOT
- Partial operating load conditions (min. 50%)
- Low maintenance requirements
- Industrial turbine technology
- Guaranteed supply of M99 methanol

Get in touch with our experts

We are here to support you, contact us to arrange an individual consultation. Our product experts will help assess your requirements and define the optimal solution for your needs.

*Applies if synthetic or bio methanol M99 is used as fuel



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This document contains general descriptions, performance data and features that may change as our products evolve.

For more information

www.silentpower.com/en/contact

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Technical data

ECONIMO 5000 | > 5 Megawatt



The data, information and ratings contained in these technical data sheets are indicative and depend on system integration and site characteristics. Talk to our product experts to arrange a feasibility study for a successful CHP installation in your facility.

Power

Global (total) efficiency	up to 90%
Electrical output	1'600 - 1'830 kW
Electrical efficiency	25%
Heating output	3'800 - 4'500 kW
Heating efficiency	65%
Cooling capability (with optional absorption chiller)	~6'500 kW
Partial load capability	Min. 55%
Acoustic emissions	<85 dB(A) @ 1 m

Other plant data

Operational	
Ambient temperature	-15°C to 35°C
Max. Humidity	95%
	non-condensing
Cycle type	Single-stage
Nominal exhaust temperature	600°C
Nominal exhaust flow	8.9 kg/s
Electrical grid connection	0.4.-13.8 kV
Time to grid	<3 min. for the first CHP

Fuel Source

Fuel type	Methanol M99 (99%)
Fuel consumption	1'450 l/h @ ISO-15°C, M99
Input grid (standard)	400V 50/60 Hz

Dimensions & Installation

Unit (L x W x H)	6.1 x 2.44 x 5.2 m
Unit weight	22 t (varies depending on configuration)
Fuel storage tank	Built-to -specification

Operation & Maintenance

Life span	Min. 20 years (at 4'000 operating hours/year)
Remote monitoring	IOT
Maintenance interval	Per 6'000 - 8'000 operating hours
Overhaul	Every 40'000 operating hours
Long Term Service Agreement (LTSA)*	

*LTSA defines maintenance depth and maintenance intervals



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Options

Organic Ranking Cycle (ORC) module

Exhaust and waste heat recovery options

Thermal oil heat exchanger

Steam heat exchanger

Absorption chiller for cooling

Alternative voltages

3-point skid for unstable foundations

Oil demister

Inlet filter Anti-Icing

Removable control room

Various operating temperature variants (-20/+40°C temperate, -60/+30°C arctic, 0/+50°C desert)

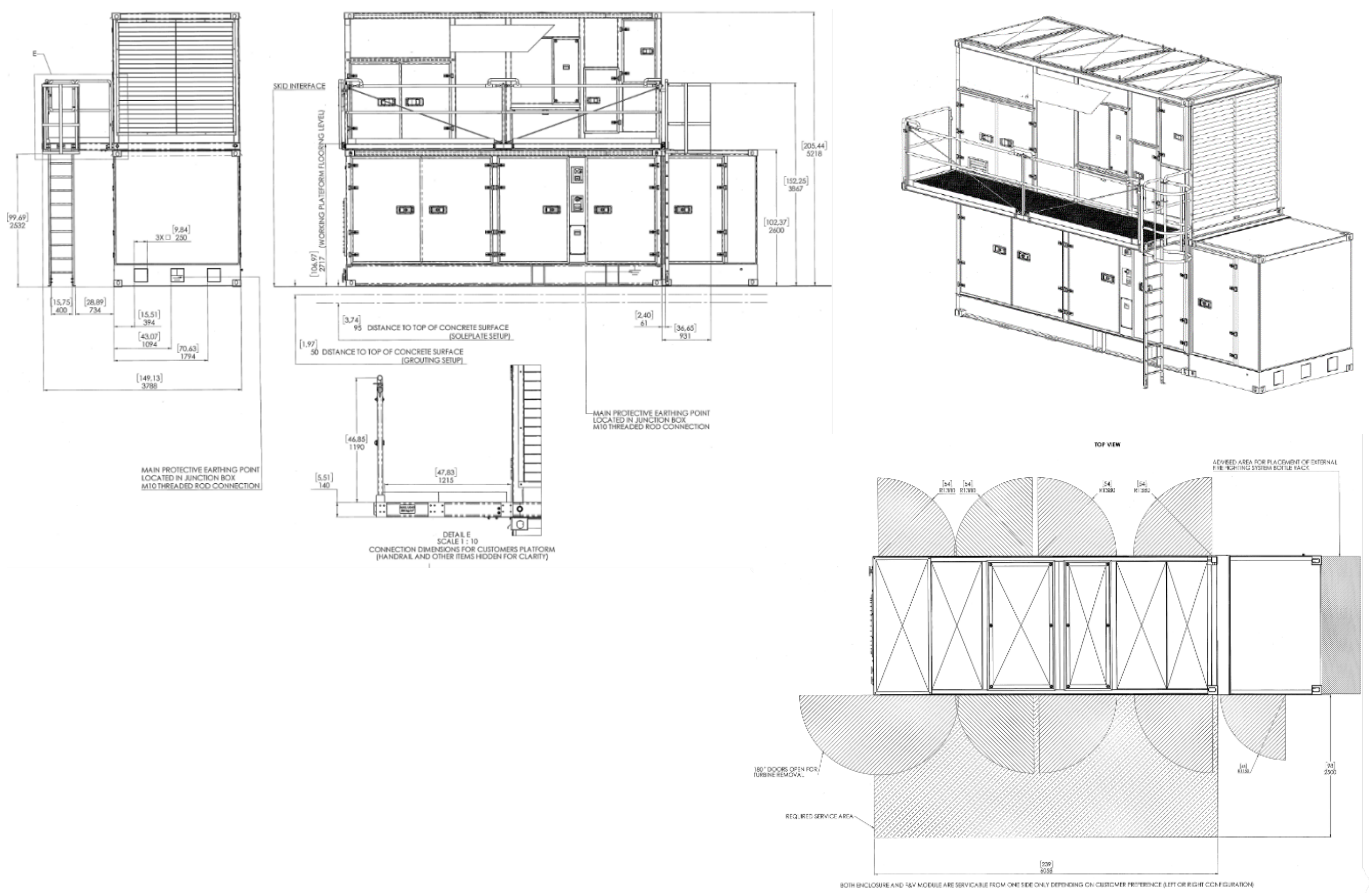
Self cleaning filters

Maintenance platform

Automatic generator lubrication

Online remote monitoring

Alternators up to 13.2 kV



Dimensions of the Econimo 5000 general arrangement.

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