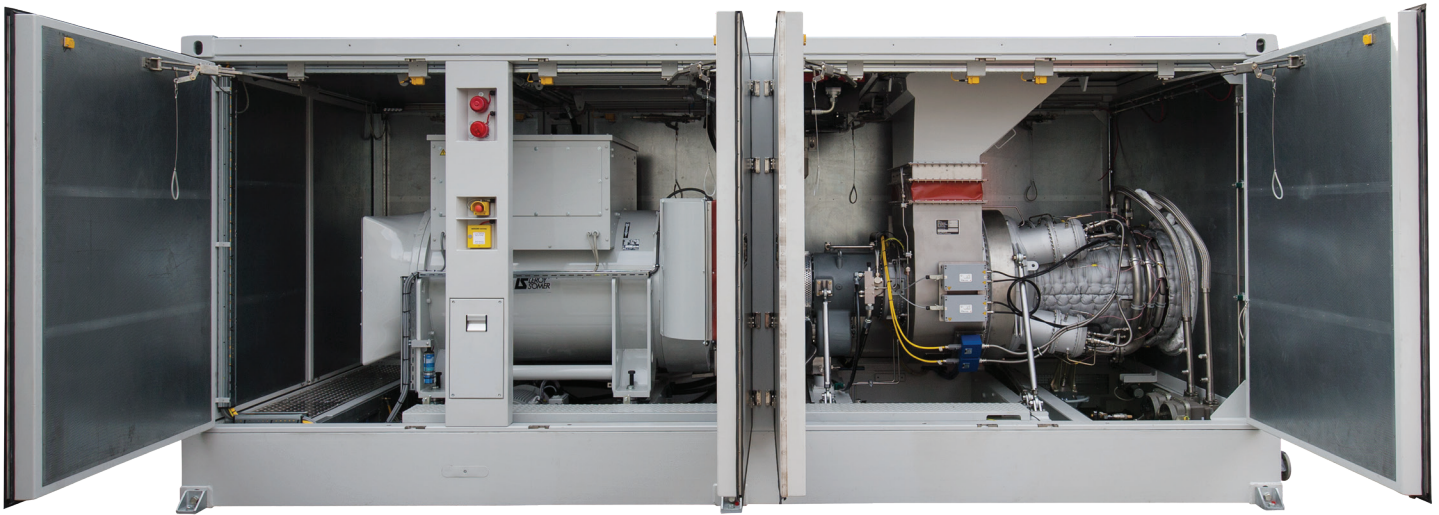


# AIREM ENERGY



## 1.8MW TURBINE GENSETS

Energy Independence Through On-Site Generation



## On-Site Generation

Airem Energy's 1.8MW turbine gensets incorporate OPRA's OP16 all-radial, single-shaft gas turbine into a compact and robust package for a range of applications. This durable design results in a highly reliable source of electricity and heat to be used in facilities ranging from industrial manufacturing plants to onshore and offshore oil & gas facilities, agricultural facilities, biofuel production plants, and marine applications.

## Smarter Solutions

The ever-increasing push for carbon reduction and energy independence requires innovative solutions that can be deployed today. The modern design of our turbine gensets allows industry leaders to achieve these goals through the generation of low-carbon electricity and heat, often resulting in total-site reductions in emissions.

## Applications



### Industrial and Commercial:

- Pulp and paper
- Food processing
- Chemical
- Automotive



### Oil & Gas:

- Flare gas to power
- Onshore sites
- Offshore platforms and FPSOs
- Refineries



### Waste to Power:

- Biogas and syngas
- Fertilizer plants
- Landfills
- Pyrolysis oil



### Marine:

- Tankers
- VOCs
- Military
- On-board power

## Key Features

- Simple, robust, and reliable
- Compact, skid-mounted and sound attenuated
- Operates in extreme environments
- Continuous or intermittent duty
- Fast start and stop
- Integrates with factory control system
- Replaces standby/emergency backup power
- Operates grid-connected or island mode

## Fuel Options

### High Calorific Gases:

- Natural gas
- Flare gas/wellhead gas
- Propane
- LPG (liquefied petroleum gas)
- Contaminated gas

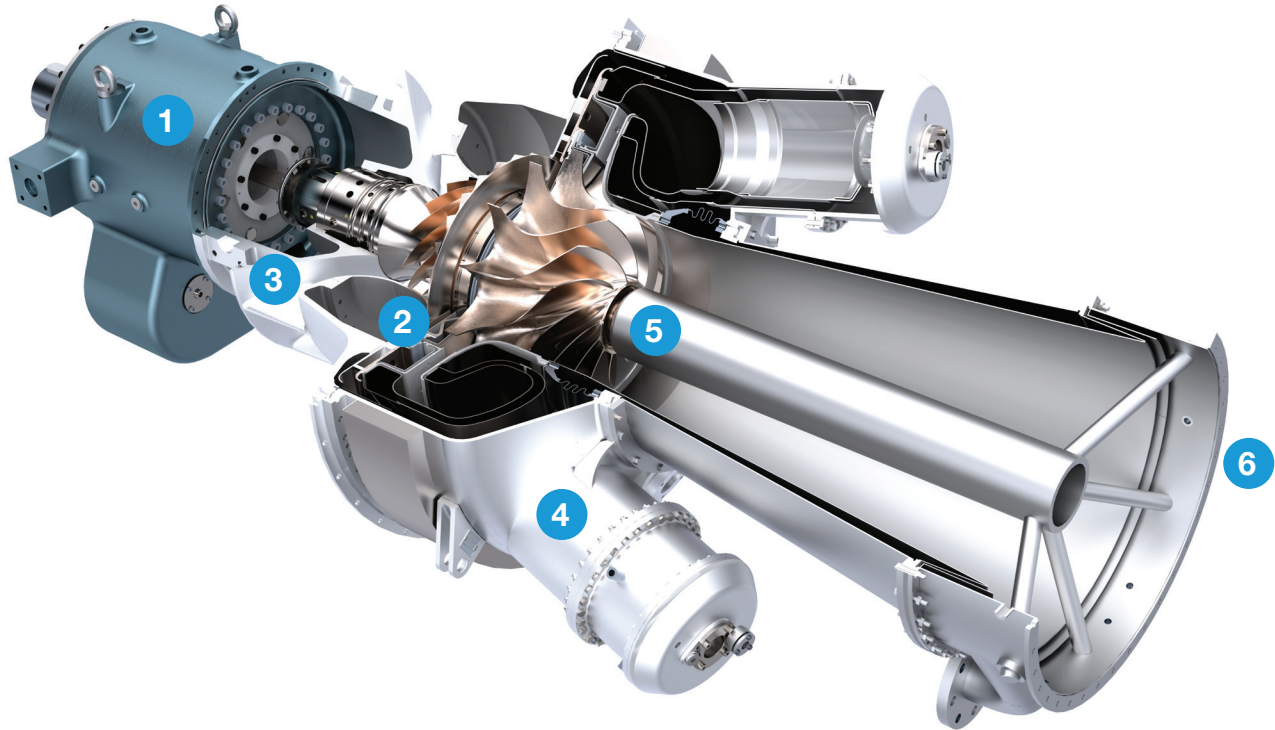
### Low and Ultra-Low Calorific Gases:

- Syngas
- Biogas
- VOCs (Volatile Organic Compounds)
- Industrial waste gas

### Liquid Fuels:

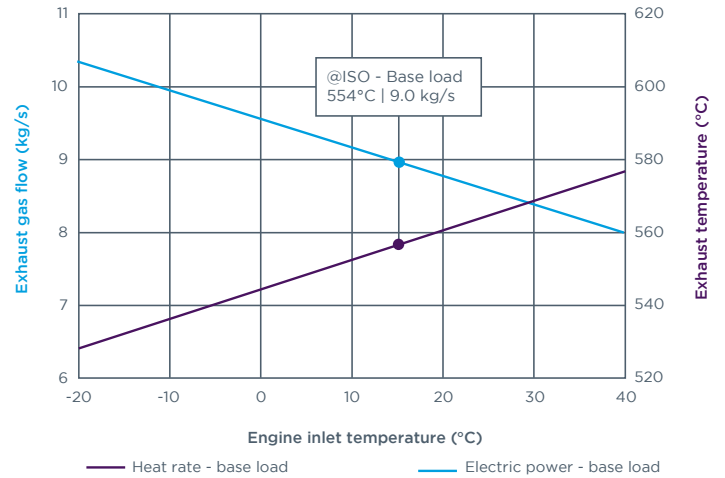
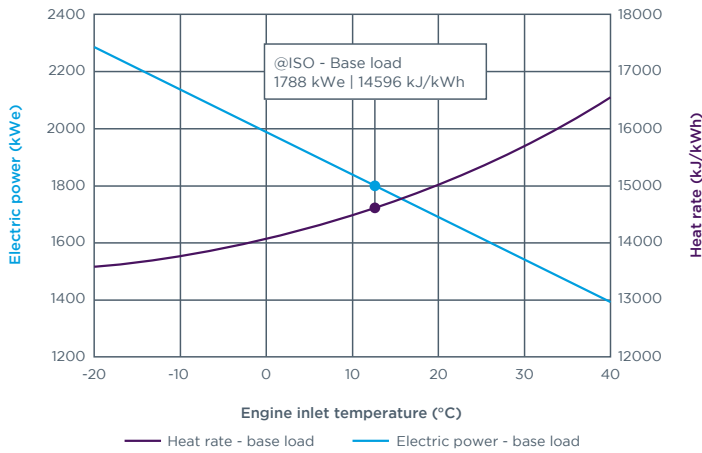
- Diesel
- Ethanol
- Pyrolysis oil
- Condensate

## OPRA OP16 Gas Turbine



- 1. Reduction gear:** Allows the use of compact 4-pole generators for 50 or 60 Hz applications.
- 2. Compressor:** Our low compression ratio allows for direct use of low fuel gas pressures, minimizing the need for external gas compression.
- 3. Bearings:** Bearings in the cold section allow minimal oil consumption and a guaranteed oil-free exhaust
- 4. Combustors:** Can be fitted and exchanged based on fuel requirements. All combustor types are interchangeable.
- 5. Radial turbine:** Allows for high fuel flexibility due to lack of cooling holes and robust forged design.
- 6. Exhaust:** Oil-free and high temperature resulting in clean, oxygen-rich exhaust with high mass flow.

## Performance Curves



### GENERAL SPECIFICATIONS

Electrical output (ISO)	1788kWe
Generator voltage	0.4-13.8kV
Total system efficiency	>90%
Time between major overhaul	40,000 hours
Time between minor inspection	8,000 hours
Start and stop time	~3 minutes
Steam generation capacity	13,000 lbs/hr
Fuel consumption (ISO)	25.7 MMBtu/hr
Thermal output (ISO)	18 MMBtu/hr
Heat rate (ISO)	13,661 BTU/kWh
Exhaust gas temperature (ISO)	1064°F
Pressure ratio	6.7:1
Total mass	55,000 - 70,000 lbs

For more information, visit [www.airemenergy.com](http://www.airemenergy.com)  
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