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HYDROGEN

AE-T100H MICROTURBINE

Available Versions*

Power Only (P)

Combined Heat & Power (CHP)

**The AE-T100H module does not include the fuel mixing system*

Microturbine

Compressor type	Centrifugal, single stage
Turbine type	Radial, single stage
Type/Number of combustion chambers	1 chamber, CAN type
Pressure in combustion chamber	4.5 bar(a)
Turbine Inlet Temperature (TIT)	950°C
Number of shafts	1 (single shaft)
Rated rotational speed	70,000 RPM

Fuel Requirements

Pressure	(6 - 8) bar(g)
Temperature	(0 - 40)°C
H_2/CH4 blend	0-100%Vol H_2
Consumption	112 Nm^3/h of pure hydrogen

General

Installation	Indoor / Outdoor – Site temperature range: -10 / +40 °C
Size (WxHxL)	1100 x 1900 / 3300** x 2770 mm (P) 1100 x 1900 / 3300** x 3900 mm (CHP)
Weight	2250 / 2750** kg (P) - 2770 / 3100* kg (CHP)
Fuel	Hydrogen (pure or blended)

*** indoor / outdoor layout*

Electrical Output

Frequency	50 Hz (60 Hz on request)
Voltage	400 V(AC), three phases

Performances

Electrical output	(100 ± 3) kW
Electrical efficiency	(30 ± 2)%
Exhaust gas flow	≈ 0.79 kg/s
Exhaust gas temperature	≈ 270°C
Average sound pressure	≈ 72 dB(A) @ 1 m

Emissions

NO_x	≤ 15 ppm(v) ≈ 31 mg/Nm^3
CO	≤ 15 ppm(v) ≈ 19 mg/Nm^3

@ full load

The above values are indicative, non-binding and subject to change without notice.

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Leading the Way to a Sustainable and Low-Carbon Future

The AE-T100H Micro Gas Turbine is a high efficiency energy system designed to operate on a versatile fuel mix of hydrogen and natural gas, suitable for cogeneration (CHP) and trigeneration (CCHP) plants.

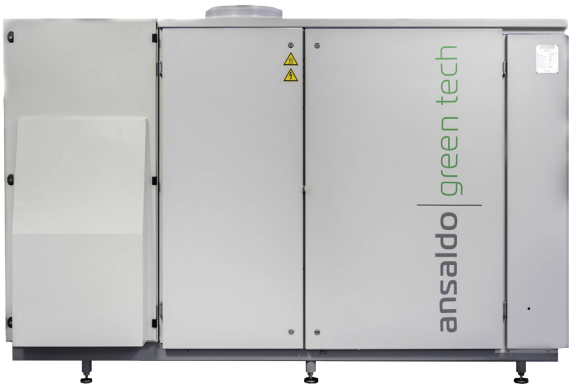
This advanced solution is perfect for residential, commercial, and industrial applications, offering unmatched efficiency, flexibility, and a significant reduction in carbon emissions.

Applications

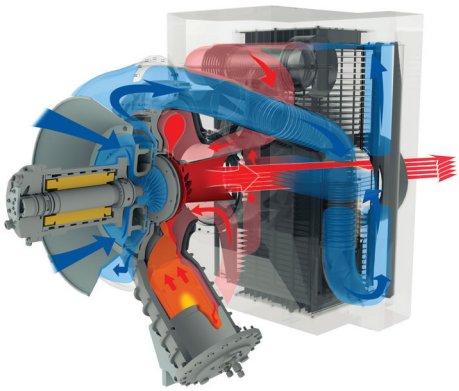
- **Residential**: Provides clean, efficient energy for homes and apartment complexes.
- **Commercial**: Ideal for offices, retail centers, and the hospitality industry.
- **Industrial**: Powers factories and production facilities with a sustainable solution.
- **Community**: Perfect for small communities and rural areas needing reliable energy.

Benefits

- **Decarbonization Impact**: By incorporating hydrogen into the fuel mix, our microturbine dramatically reduces CO_2 emissions, supporting your efforts to meet and exceed environmental regulations and sustainability goals.
- **Flexible Fuel Options**: Capable of running on hydrogen, natural gas, or any combination of the two, our microturbine provides flexibility and adaptability to varying fuel availability and cost considerations.
- **High Efficiency**: Engineered for optimal energy conversion, our microturbine ensures maximum electricity generation, lowering fuel consumption and operational costs.
- **Reliability and Longevity**: Constructed with premium materials and cutting-edge technology, our microturbine delivers reliable, long-term performance with minimal maintenance requirements.
- **Versatile Applications**: Suitable for a wide range of uses, from residential homes to industrial plants, our microturbine can be seamlessly integrated into existing energy systems or function as an independent power source.
- **Cost Savings**: The high efficiency and flexible fuel options contribute to significant energy cost savings, offering a swift return on investment.



AE-T100H



Power Train - operating principle

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