

AE-T100B MICROTURBINE



Available Versions

Power Only (P), Combined Heat & Power (CHP)
The AE-T100B does not include the biogas compression-treatment device



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

Required pressure*	(6 - 8) bar(g)
Required temperature	(0 - 40)°C
CH4 min	> 40%
Wobbe Index**	(18 - 25) MJ/Nm ³
Consumption***	333 kW ≈ (34 - 85) Nm ³ /h
H2S max (hydrogen sulfide)****	< 2280 mg/Nm ³ ≈ 1500 ppm(v)
Siloxanes max****	< 150 mg/Nm ³

(*): AE-T100B without biogas compression-treatment device
(**): as defined in technical description

(***): depending on fuel LHV

(****): with an appropriate biogas treatment system, operation is possible in all cases



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	Biogas

(*): indoor / outdoor layout



Electrical data

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



Performances

Electrical output	(105 ± 3) kWel
Electrical efficiency	(30 ± 2)%
Exhaust gas flow	≈ 0.79 kg/s
Exhaust gas temperature	≈ 270°C
Average sound pressure	≈ 72 dB(A) @ 1 m

(*): biogas compressor consumption not included



Emissions***

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

(*): @ full load - (105 ± 3) kW, biogas compressor consumption not included - 15% O₂

(**): depending on biogas composition

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

The AE-T100B Micro Gas Turbine is a high efficiency energy system suitable for cogeneration (CHP) and trigeneration (CCHP) plants fired with biogas produced by:

- Civil and industrial sewage and wastewater treatment plants
- Landfill gas collection systems
- Anaerobic digestion processes

The main clients for the AE-T100B are therefore:

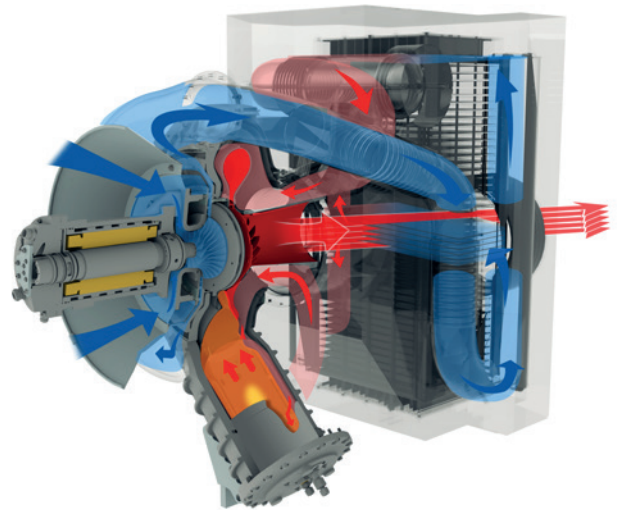
- Multi-utilities
- Industries with wastewater purification/treatment systems

Benefits of Ansaldo Green Tech AE-T100 technology:

- High tolerance of biogas components
- Remote monitoring, control and operation
- FULL SERVICE contracts stipulated directly with Ansaldo Green Tech and/or with authorised Partners
- Low maintenance requirements: scheduled service intervals of 6,000 operating hours
- Low acoustic emissions
- Low exhaust gas emissions without the use of reduction devices
- Operation possible in a wide range of partial load conditions
- Modular
- Designed for both indoor (technical rooms, thermal power plants) and outdoor installations



AE-T100B



Power Train - operating principle

Ansaldo Energia, all rights reserved. Trademarks mentioned in this document are the property of Ansaldo Energia, its affiliates, or their respective owners in the scope of registration. The information contained in this document is merely indicative. No representation or warranty is provided, nor should be relied on, that such information is complete or correct or will apply to any particular project. This will depend on the technical and commercial circumstances. Said information is provided without liability and is subject to change without notice. Reproduction, use or disclosure to third parties, without express written authority, is strictly prohibited.

Via N. Lorenzi, 8 - 16152 Genoa - Italy
Tel: +39 010 655 1
Mail info@ansaldogreentech.com
ansaldoenergia.com