



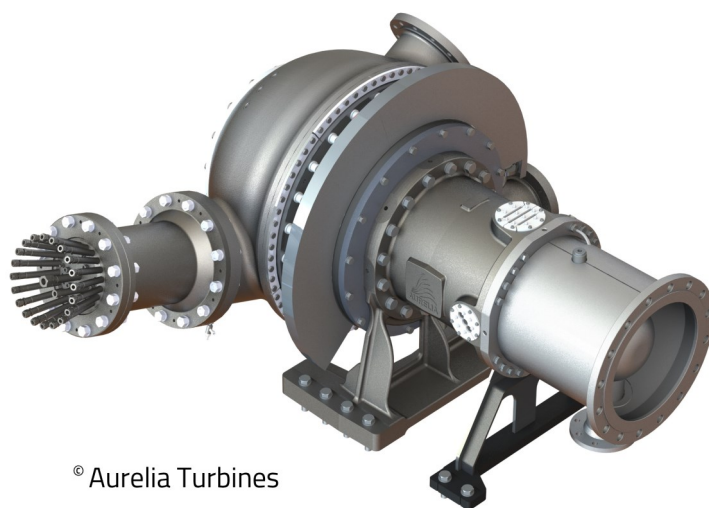
Aurelia® iA400

The most efficient small gas turbine in the world. The Aurelia® iA400 provides 400 kW_e with an electrical efficiency greater than 40% through Aurelia's integrator model. The integrator has freedom to package the turbine units according local demands and requirements. The turbine is a twin-spool, intercooled and recuperated (IRG2) gas turbine. The combustor is designed to utilise a wide range of fuels, from standard gaseous fuels to biogas, flare gasses and even synthetic and recovered gases.



LP Turbine Unit

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HP Turbine Unit

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Illustrated image

Integrator model features and benefits:

- Local packaging & requirements
- Local manufacturing
- Use of local components
- Access to Aurelia's supplier network
- Aurelia patented IRG2 technology
- Active Magnetic Bearings (AMB)
- Single-can combustion chamber
- High speed power generation
- Highest electrical efficiency in class
- Fuel flexibility
- Worldwide service network
- No lubricants, no friction, no wear
- Low emissions
- Zero vibration
- Minimal maintenance and down-time

The most efficient small gas turbines in the world



Electrical specification of generators¹

Rated power output	250 kW
Phase voltage	350 VAC
Frequency	553 Hz
Line current	440 A
Power factor	0.94

Exhaust characteristic¹

NO _x emissions at 15% O ₂	With natural gas < 20 ppm-v With biogas, flare gas & syngas < 30 ppm-v
CO emissions at 15% O ₂	< 65 ppm-v
Intercooler power/heat recovery, max	340 kW
Exhaust heat recovery after recuperator	Depends of recuperator type & recuperation efficiency
Exhaust gas O ₂ level	17.5%

Environment to operate turbine units

Process intake air temperature	-20 °C to +40 °C
Used process fluid	Ambient air
Process air filter Requirements	G4 and F7 filters
Storage & operating atmosphere	0 to 95% RH, non-condensing, non-corrosive
Environment temperature range inside container	-20 °C to +60 °C
Installation environment	Installed inside enclosure/ container

For details see Integrator manual

1) Operation at full power in ISO standard reference conditions: 15 °C, 101.325 kPa, RH 60% and with intercooler return temperature of 15 °C.

Fuels

Due to the modular design the combustion chamber is easily adjustable to meet the requirements of different fuels. Turbine is designed to utilize a wide range of fuels, from standard gaseous fuels to biogas, flare gas and even synthetic and recovered gases.

Natural gas, biogas, flare gas & syngas

Range of LHV	5...48 MJ/kg
Fuel mass flow	21...200 g/s
Fuel inlet pressure	600...700 kPa(g)
Hydrogen volume content, initial max	50%

Scope of Supply

- Low Pressure Turbine Unit
- High Pressure Turbine Unit
- AMB system with Magnetic Bearing Controllers
- PLC with Aurelia IRG2 software
- Documentations and guidelines to complete IRG2 technology based gas turbine design

Directives & Certifications

The turbine units and integrator model has been designed according to following European directives:

- Machinery Directive 2006/42/EC
- Low Voltage Directive 2014/35/EC
- Pressure Equipment Directive 2014/68/EC

The integrator must comply with integrator guidelines and local regulations in design, safety and manufacturing of the final product.