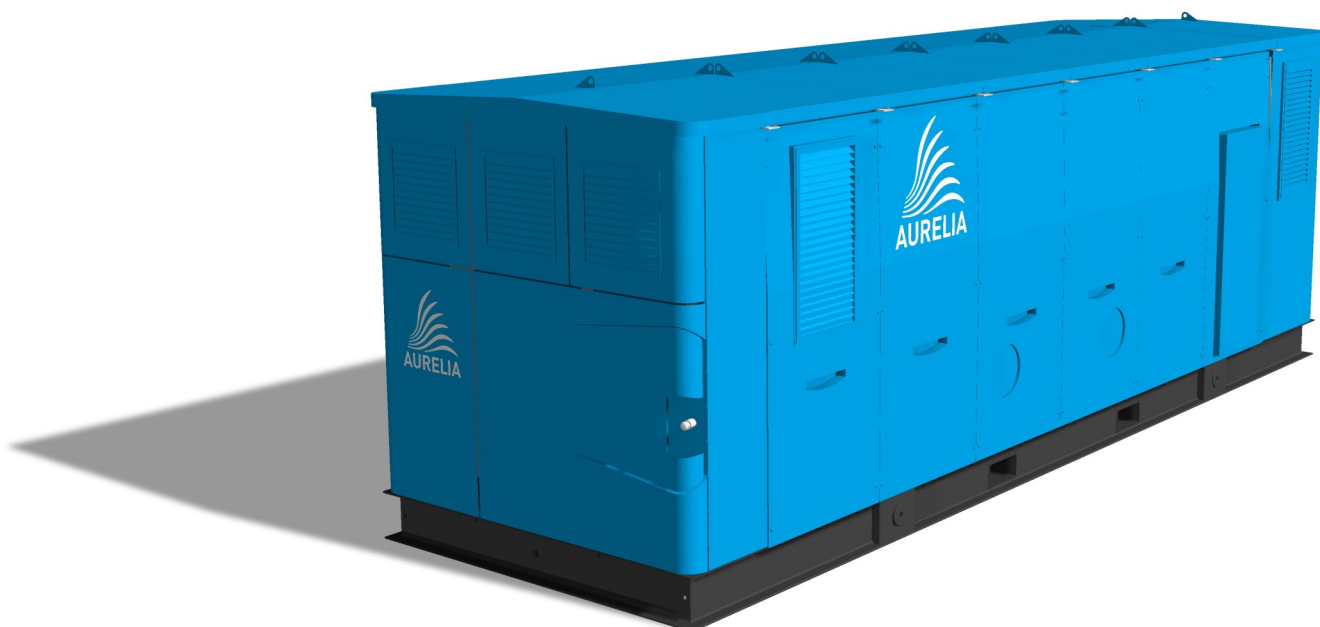




Aurelia® A400

The most efficient small gas turbine in the world. The Aurelia® A400 provides 400 kW_e with an electrical efficiency greater than 40 %. The turbine is a twin-spool, intercooled and recuperated (IRG2) gas turbine. The turbine is of modular construction and is designed to utilise a wide range of fuels, from standard liquid and gaseous fuels to biogas, biodiesel, flare gasses and even synthetic and recovered gases.



Illustrated image

Product features and benefits

- Modular design
- Active magnetic bearings
- Single-can combustion chamber
- Remote monitoring
- High speed power generation
- Highest electrical efficiency in class
- Worldwide service network
- No lubricants, no friction, no wear
- Low emissions
- Zero vibration
- Indoor and outdoor installations
- Minimal maintenance and down-time
- Integrated inlet air filters

The most efficient small gas turbines in the world

www.aureliaturbines.com



Electrical performance & network

Electrical efficiency LHV	40.2 %
Electrical output to net	400 kW _e
Output voltage	400/480 V
Output frequency	50/60 Hz
Maximum output current at 400 VAC, cos phi = 1	577 A
Electrical connection	3 phases, 4 wires
Grid code	NC RfG, others on request
EMC level	IEC 61800-3 for IT networks

Exhaust characteristic

NO _x emissions at 15 % O ₂	<15 ppm / V
CO emissions at 15 % O ₂	<15 ppm / V
Exhaust gas flow at full power	2.2 kg/s
Exhaust gas temperature at full power	185 °C
Exhaust energy at full power	1 188 MJ/h
Heat recovery from intercooler	278 kW
Heat recovery from exhaust gas	240 kW
Exhaust gas O ₂ level	17.5 %

Dimensions, weight & clearances

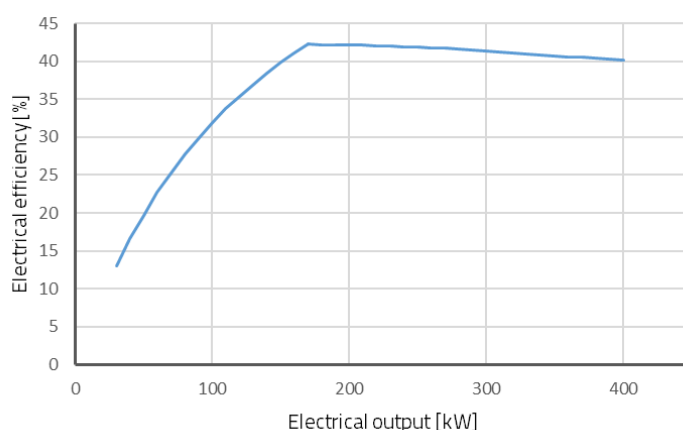
Enclosure protection	IP 34
Dimensions (WxHxL)	3.0 x 3.3 x 9.7 m
Weight	22 000 kg
Clearances/service area	
Left / right	3.0 m
Front	1.5 m
Rear	1.5 m
Above	1.5 m

Temperature limitations

Cooling air relative humidity	RH 0...95 %	Non-condensing, Non-corrosive
Operating temperature	-10...+40 °C	Below 0 °C cold weather starting procedure
Storage temperature	-20...+50 °C	

Permitted chemical vapours according to IEC 60721-3-2.

Partial load efficiency



Fuels

Due to the modular design the combustion chamber is easily adjustable to meet the requirements of different fuels. Turbine is designed to use all standard liquid and gaseous fuels and gives options for non-standard fuels.

Fuel flow LHV	3 582 MJ/h
Maximum allowed H ₂ S content	2 % (vol.)
Net heat rate LHV	8 955 kJ/kWh
Gaseous fuel inlet pressure min/max	700...800 kPa(g)
Liquid fuel inlet pressure min/max	0...+50 kPa(g)

Acoustic emissions

Acoustic emissions at nominal power less than 75 dB(A) @ 10 meters from the turbine.

Directives & Certifications

The turbine has been designed according to following standards:

- Machinery directive [MD] 2006/42/EC, 2009/127/EC
- Low voltage directive [LVD] 2006/95/EC
- Electromagnetic compatibility [EMC] 2004/108/EC
- Noise directive 2000/14/EC