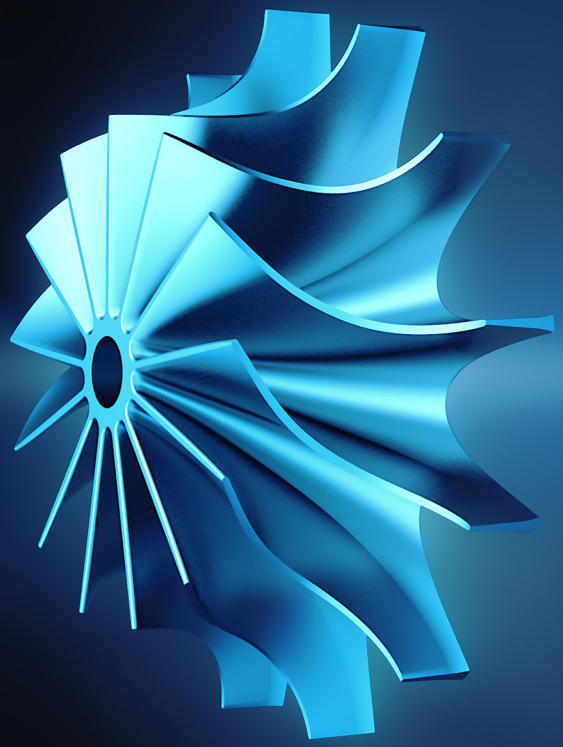
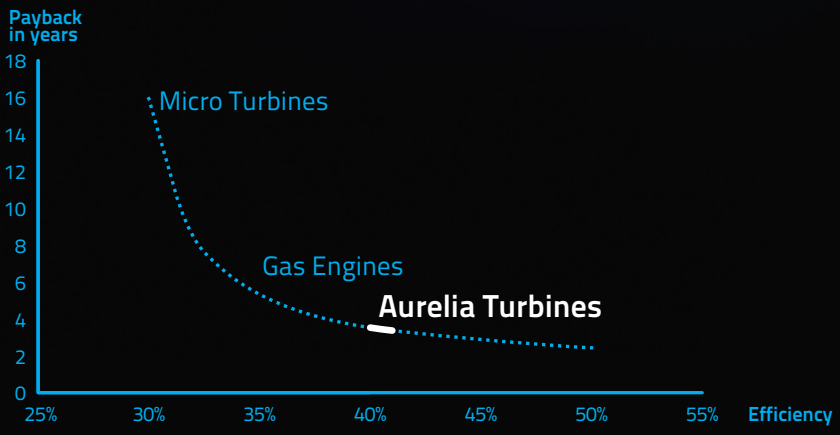
Aurelia Turbines

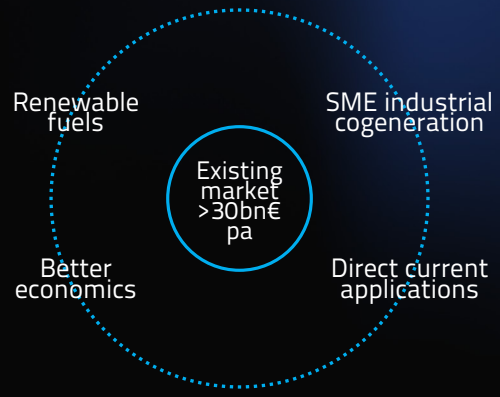
The most efficient small gas turbines in the world



Why efficiency is important?



Efficiency opens markets



Advanced Technology

- 400 kWe over 40% efficient
- Active magnetic bearings
- Twin turbine shafts
- Permanent magnet generators

Turbine Features

- No lubrication fluids required
- Fuel flexibility, low emissions
- Low maintenance, long life
- High part load efficiency

Benefits for the Customer

- Low operating & maintenance costs
- Greater process control
- Certainty of energy costs & supply
- Faster payback

AURELIA®

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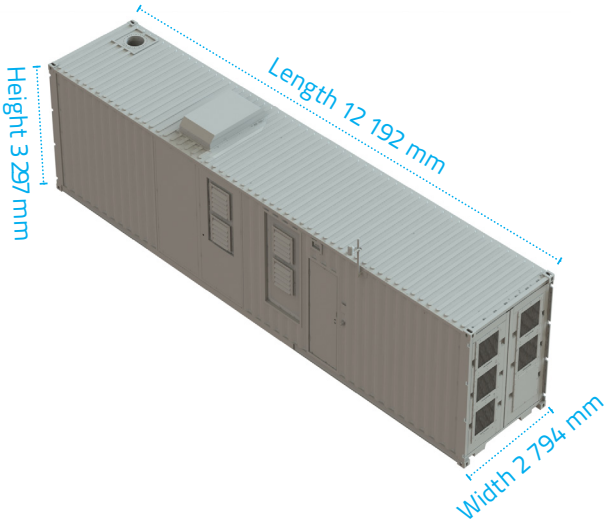
Flyer updated on 16 Oct 2024

Datasheet

Aurelia® A400

Dimensions as installed on site



Basic facts

- Enclosure protection IP 34 & indoor/outdoor installation
- Weight 22 000 kg
- Acoustic emissions <85 dB(A) @ 1 metre distance, 1.6 metre height
- Easily transportable, with standard 40ft HC container dimensions

Temperature limitations

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

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
Max. output current at cos phi = 1	577/481 A
Electrical connection	3 phases + N + PE
Harmonic current distortion	THdi <5%
Power factor	Settable in range 1-0.75 (leading or lagging)
Grid code	On request

Exhaust characteristics

NO_x emissions at 15 % O_2 at nominal operating point	nat. gas <20 ppm-v biogas, flare gas & syngas <30 ppm-v
CO emissions at 15 % O_2 at nominal operating point	<65 ppm-v
Interrcooler power / heat recovery, max	340 kW (at max. operating temp.)
Exhaust gas temp. at full power	150°C*
Exhaust gas O level	17.5%
Heat recovery from exhaust gas	160 kW*

* Depends on used fuel, heat recovery outlet temperature. Contact Aurelia for details.

Fuels

Modular design makes the combustion chamber easy to adjust to meet different fuel requirements. The turbine is designed to use a variety of fuels, from standard gaseous fuels to biogas, flare gas, synthetic and recovered gases.

Natural gas, biogas, flare gas, syngas:

Range of LHV	5…48 MJ/h
Fuel mass flow	21…200 g/s
Fuel inlet pressure	600…700 kPa(g)
Hydrogen volume content, max.	50%
H_2S capability up to 7% with additional H_2S optional kit	

Directives and Certifications

The A400 is designed and manufactured in compliance with applicaple EU directives and a variety of national and international standards.

- Machinery Directive (MD) 2006/42/EC
- EMC Directive 2014/30/EU
- Low Voltage Directive (LVD) 2014/35/EC
- Pressure Equipment Directive (PED) 2014/68/EU
- ATEX 2014/34/EU

For details see manuals.