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Hydrogen



Bio Gas



Flare Gas



Syngas

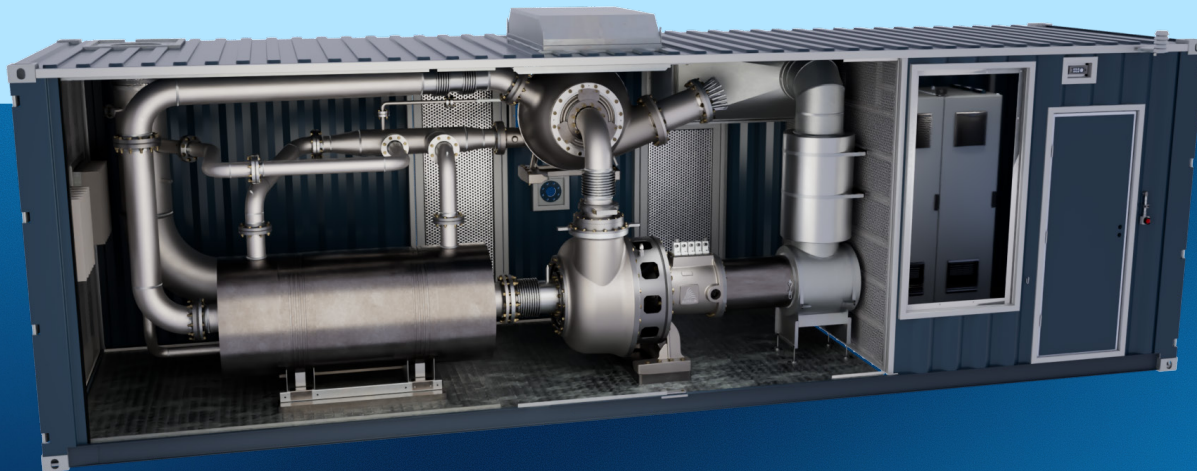


Nat Gas

A400

## Turbine Package Datasheet

The **A400** provides 400 kW<sub>e</sub> with an electrical efficiency greater than 40%. The A400 gas turbine utilises a patented twin-spool, intercooled and recuperated (IRG2) gas turbine process. Its combustor is designed to utilise a wide range of fuels, from standard gaseous fuels to biogas, flare gas and even synthetic & recovered gases.



- Modular design
- Active magnetic bearings (AMB)
- Single-can combustion chamber
- Patented IRG2 technology
- High speed power generation
- Highest electrical efficiency in class
- Extensive fuel flexibility
- Worldwide service network
- No lubricants, no friction, no wear
- Ultra low emissions
- Near-zero vibration
- Minimal maintenance & downtime
- Indoor & outdoor installations
- Integrated inlet & cooling air filters

A400

## Electrical Performance

Electrical Efficiency	40.2%
Rated Power Output	400 kW <sub>e</sub>
Output Voltage	400/480 VAC
Output Frequency	50/60 Hz
Max Output Current (cos phi = 1)	577/481 A
Power Factor	Adjustable: 1 - 0.75
Electrical Connection	3 ph + N + PE
Grid Code	On request
Harmonic Distortion	<5%

## Exhaust Characteristics

NO <sub>x</sub> Emissions at 15% O <sub>2</sub> (ISO Conditions)	Nat Gas: <15 ppm-v Biogas, Flare & syngas: <30 ppm-v
CO emissions @ 15% O <sub>2</sub> (ISO Conditions)	<65 ppm-v
Intercooler power / heat recovery	248 kW
EGT (Full Load)	302°F (150° C)
O <sub>2</sub> Content	17.5 %
Exhaust Heat Recovery	160 kW

## Dimensions & Clearances

Enclosure Protection	IP 34
Dimensions, installed (W x H x L)	9' 2" x 10' 10" x 40' (2794 x 3297 x 12192mm)
Dimensions, transported (W x H x L)	8' x 9' 6" x 40' (2438 x 2896 x 12192mm)
Weight	48,500 lbs (22,000 kg)

## Acoustic Attenuation

Average noise level less than 85 dB(A) at 1.0m  
horizontal & 1.6m vertical

Emissions for alternate fuels may vary based upon exact composition.

Electrical & exhaust performance data given at standard ISO conditions with an intercooler return temperature of 15° C.

Intercooler and exhaust heat recovery calculated at nominal conditions.

## Environmental Limits

Operating Temperature	-4°- +104° F (-20°- +40° C)
Storage Temperature	-4°- +122° F (-20°- +50° C)
Operating Humidity	0 to 95% RH
Storage Humidity	0-95%, Non-corrosive, Non-condensing
Installation Environment	Indoor & Outdoor

### Fuels

Due to the modular design, the combustion chamber is easily adjustable to meet the requirements of **natural gas, biogas, flare gas, syngas and hydrogen**.

LHV Range	2150 - 20,600 BTU/LB (5 - 48 MJ/kg)
Fuel Mass Flow	170 - 1,600 LB/HR (21 - 200 g/s)
Fuel Inlet Pressure	87 - 102 PSI (g) 600 - 700 kPa (g)
H <sub>2</sub> Content	up to 50%
H <sub>2</sub> S Capability (with additional equip.)	up to 7%

## Directives & Certifications

The A400 is designed and manufactured in compliance with applicable EU directives and a variety of 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
- UL Compliant

*For additional details, refer to the package manual.*