Destinus

Flare Gas

Power Generation Solutions

Turning Flare Gas Into Electricity and Heat

What is it and why is it a problem?

Gas flaring refers to the harmful practice of wastefully burning surplus of associated gas during oil production. Although gas flaring may appear to be a convenient method for disposing of associated gas, it has numerous adverse effects on the environment, human health, and the sustainability of the companies engaged in this activity.

- Around **140 bcm of natural gas is flared** globally each year.
- Flaring is a **major source of CO2 emissions**, methane and black soot.
- Around **42 million tonnes** is emitted in the form of unburnt methane.
- More than **600 million people** can be provided with heat & electricity utilizing this amount of gas.

Destinus - Your Partner in Zero Routine Flaring by 2030

Destinus has the ultimate solution for converting flare gas into useful energy. The OPRA OP16 Gas Turbine with its simplicity of design is the key to unsurpassed reliability and low operating costs. Unbeaten fuel flexibility and resistance to high sulphur content, as well as other pollutants, allow you to minimize the cost of fuel treatment. Due to the compact design and low weight, integration of the OPRA OP16 turbine is possible even in the space-limited environment of the operating plant in remote locations.

Why choose OPRA OP16 Gas Turbine for Zero Flaring?

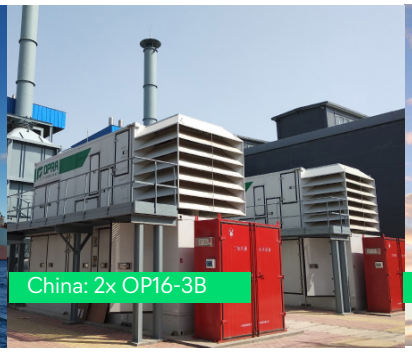
- Emission reductions up to 40%*
- Low noise level down to 80dB(A)
- H2S accepted up to 7%*
- Low energy costs 0,017 €/kWh**
- Fuel flexibility (wide range of LHV)
- Inrush load & drop possibility up to 100% of nominal power
- Stable operation across the entire load range
- Island or grid parallel mode operation across the entire load range
- Dual fuel capability with online changeover
- Lube oil consumption is near zero
- Very low vibration levels
- Minimized foundation requirements
- Long time between overhauls
- Compact and lightweight design

*The numbers provided are subject to change depending on the specific project and fuel composition.

** The cost of electricity is net, based on fixed costs and ISO conditions, provided that flare gas is free, without reference to a particular region, taxes, and other variables.


USA: 3x OP16-3B


4x OP16-3C


China: 2x OP16-3B


2 x OP16-3A

RISAVIKA GAS CENTRE · WÄRTSILÄ · siniat · ITERA · ITC · TK · EIL ELECTRICALPLANTS · SORBES+ · BRITISH AMERICAN TOBACCO · BASF The Chemical Company · Chevron

BR PETROBRAS · VENTURE PRODUCTION plc · Otsuka · e·on · DEBYOZA CERAMICA · Continental CONTITECH · wintershall · Twin Rivers Technologies

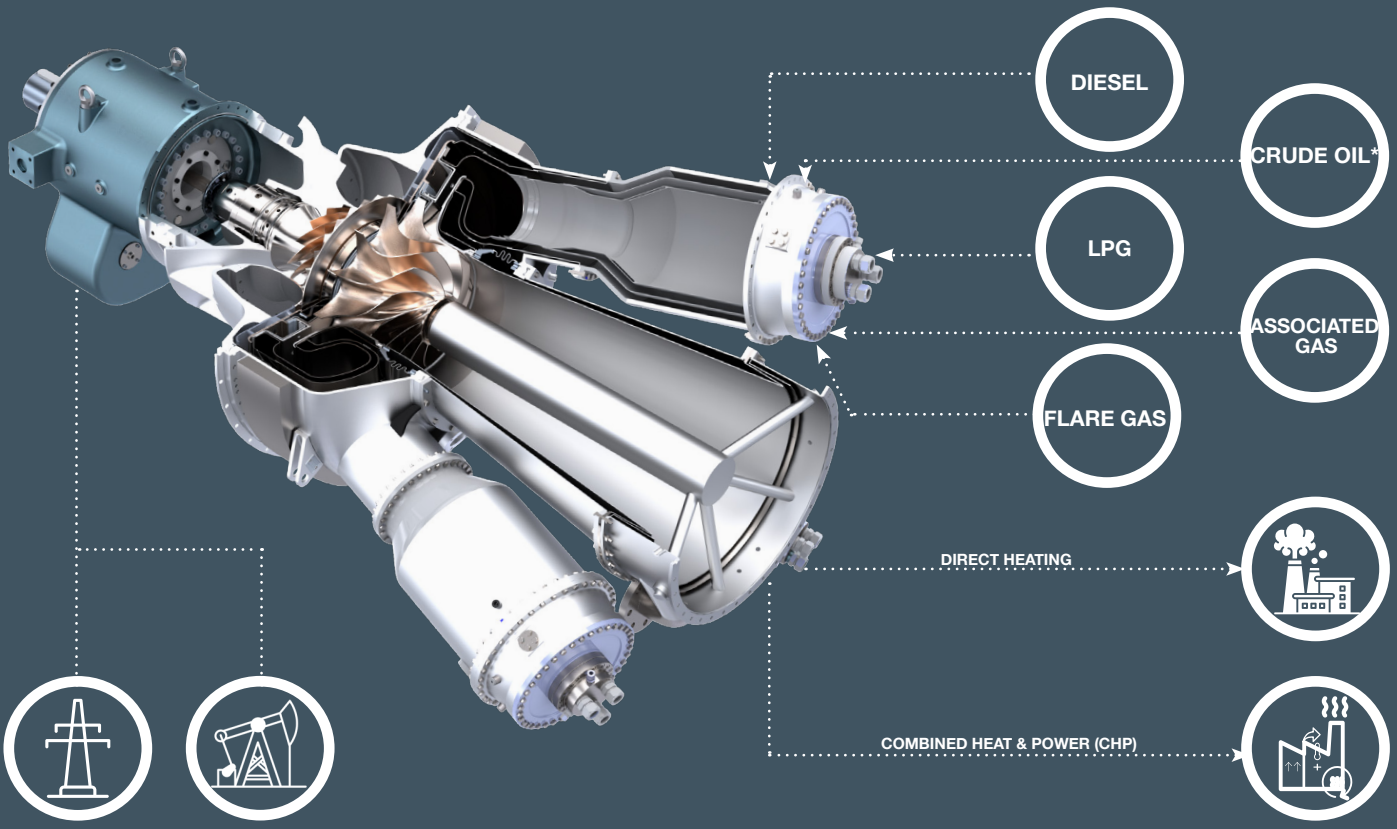
FUJIFILM · Statoil · SAMSUNG · SAMSUNG HEAVY INDUSTRIES · PHILLIPS 66 · SPIRIT ENERGY · Electro-Quip Service, Inc.

Get in touch with us

T: +31 (0)74 245 2121
info@destinus.energy

www.destinus.energy

OPRA OP16: POWER FOR THE ENERGY TRANSITION



*Some types of crude oil may need pre-treatment.

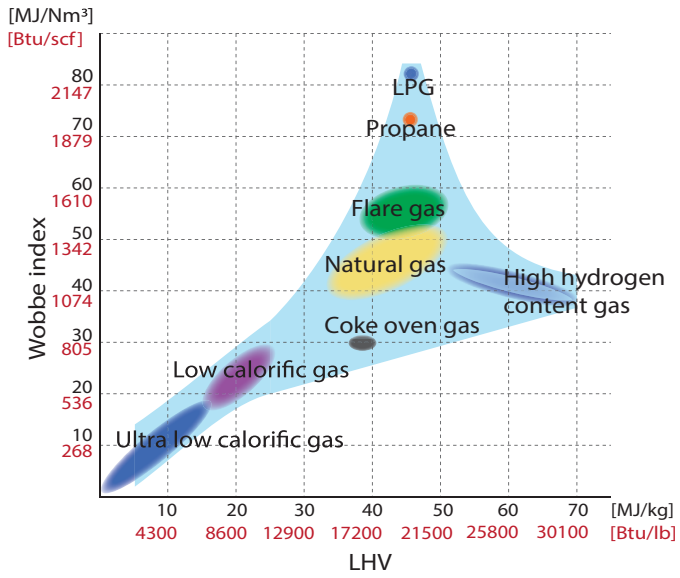
FUEL FLEXIBILITY

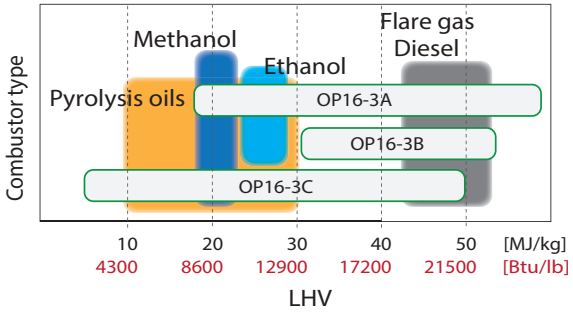
The OPRA OP16 is suitable for a large range of fuels including the followings:

High Calorific gases:
- Natural gas
- Hydrogen
- Flare gas / Wellhead gas
- Propane
- LPG (Liquified Petroleum Gas)

Low & Ultra Low Calorific gases:
- Syngas
- Biogas
- VOC (Volatile Organic Compounds)
- Industrial Waste gas

High & Low calorific Liquid fuels:
- Diesel
- Pyrolysis oils
- Methanol
- Ethanol
- Condensate





OPERATION FLEXIBILITY

Robust by design:

- Radial turbine
- Limited number of rotating components
- Bearing in the cold section
- No blade cooling
- No oil consumption
- No oil contamination

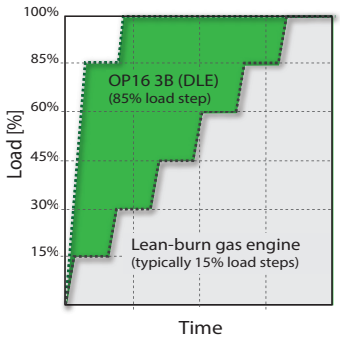
Maximum uptime:

- Single annual inspection
- No oil in the exhaust
- Availability above 98%*
- Field proven technology
- 42 500 hrs between overhauls

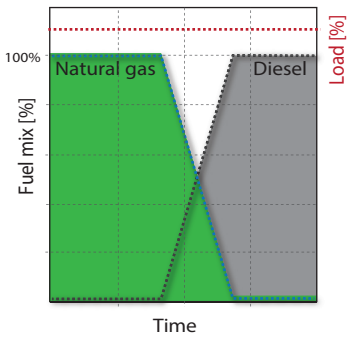
Lifecycle value:

- Worldwide support
- Flexible maintenance solutions
- Remote monitoring
- Retrofits for installed fleet

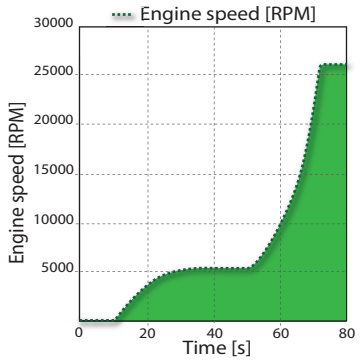
Transient loads acceptance:



Dual fuel flexibility:



Optional Quick start capability:



*Includes scheduled and unscheduled maintenance, considering 8760hrs per year.

Shaft Power Output	1956 kW
Electrical Power Output	1850 kWe
Thermal Power Output	5483 kWe
Availability	>98%*
Fuel Consumption	864 Nm^3/h (NG) 25.7 MMBTU/h
Heat Rate	14413 kJ/kWh 13661 Btu/kWh
Exhaust Gas Flow	9.0 kg/s 19.8 lb/s
Exhaust Gas Temperature	573 °C 1064 °F
Rotating Speed	26000 rpm
Gearbox Shaft Speed	1500 rpm (50Hz) 1800 rpm (60Hz)
Generator Voltage	0.4 to 13.8 kV

PERFORMANCES