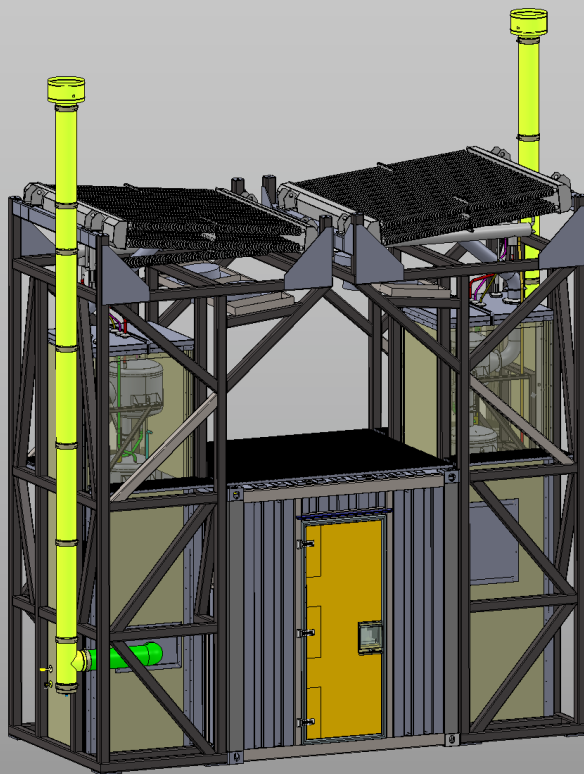




Eudosa Remote Power Turbine



CONTINUOUS POWER OUTPUT

Up to 4 kW

Per tower • scalable up to 8 kW
Arctic • Desert • Offshore ATEX

Autonomous ORC power generation for remote, unmanned sites — continuous output, minimal maintenance, engineered for Arctic, desert and offshore-ATEX environments.



* PRODUCT OVERVIEW

The ERPT (Eudosa Remote Power Turbine) is an electrical generation system for remote, unmanned applications, based on the Organic Rankine Cycle (ORC). Heat from gas combustion vaporises an organic fluid that drives a turbine coupled to an alternator, producing continuous power with minimal maintenance.

Designed as an outdoor unit, the ERPT operates in extreme

environments, from the Arctic to the hottest deserts, offering a real alternative to solar and wind solutions in the most critical industrial contexts.

Eudosia Remote Power Turbine

* HOW IT WORKS

The ERPT runs on the Organic Rankine Cycle (ORC), operating under vacuum at low temperature (below 200 °C) and low pressure. Gas combustion vaporises an organic working fluid, whose vapour drives a turbine-alternator to generate electricity, before it is condensed and returned to the closed loop.

1

Combustion

Gas burner heats the working fluid

2

Vaporisation

Organic fluid turns to vapour

3

Turbo-alternator

Vapour drives the generator

4

Condensation

Air-cooled, fluid returns to loop

* MAIN COMPONENTS

01 Combustion System

Gas supply, burner and exhaust; generates the process heat.

03 Turbo-Alternator

Vapour spins the turbine (up to 15,000 rpm) to generate 3-phase power.

05 Electric & Control System

Rectifies and regulates the output; monitors the machine.

07 Walk-in Shelter

IECEX-certified enclosure housing combustion and controls.

02 Vapor Generator

Contains and vaporises the organic motive fluid.

04 Cooler

Air-cooled unit that condenses the vapour back to liquid.

06 Structural Frame

Lightweight, anti-seismic support; ships in a standard container.

* KEY FEATURES

- Power generated to match actual load demand

- Unattended operation – annual visual inspection only

- Designed for 30+ years with no overhaul

- Regulated 48 V DC output (48–56 V DC, $\pm 0.5\%$)

- Remote monitoring and control

- Outdoor unit for the harshest environments

Eudosia Remote Power Turbine

* CONFIGURATIONS

Offshore

ATEX Zone 2, Group IIA, T3; compact footprint for platforms and barges.

Desert

Runs up to +65 °C with special desert mix and boosted cooler fans.

Arctic

Operates to -45 °C with no-freeze mix and dedicated insulation.

Hybrid

Combined with existing power equipment on site.

* APPLICATIONS

Power for remote and unmanned industrial sites.

Oil & Gas

Energy & Power Generation

Remote / unmanned sites

Offshore platforms

Arctic & desert sites

* WHY ERPT

- Continuous power — a real alternative to solar and wind

- Very low CO₂ — burner only

- No performance ageing of critical parts

- Small footprint for equivalent output

- Field-proven reliability, 30+ year life

- Scalable: up to 4 kW/tower, up to 8 kW with two towers

Eudosia Remote Power Turbine

* SPECIFICATIONS

Rated power Up to 4 kW · 48 V DC (regulated)	Dimensions (L×W×H) 5140 × 2200 × 5434 mm	Weight ≈ 8,050 kg
Fuel Natural gas or LPG · 1–4 barg	Consumption 8.8 Nm³/h @ 4 kW	Operating temperature –45 °C ÷ +65 °C

* INSTALLATION

Outdoor	Onshore	Offshore
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* ENVIRONMENTAL AND OPERATING CONDITIONS

- **Operating temperature:** Arctic –45 °C ÷ +40 °C; Desert / Offshore –10 °C ÷ +65 °C; storage –50 °C ÷ +70 °C.
- **Wind & installation:** Wind resistance up to 40 m/s (gusts to 45 m/s); outdoor installation, onshore and offshore.

* SAFETY AND PROTECTION

- Over-voltage shutdown.
- Protection against intermittent and permanent short-circuits.
- Vapor-generator over-temperature shutdown.
- Condenser over-temperature alarm and shutdown.
- Turbine over-speed protection.
- Pilot-flame failure shutdown.

* CERTIFICATIONS

Electrical systems

EN / CEI 61439	CEI 64-8
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Steelwork & welding

UNI EN 1090-1 / 1090-2	ISO 3834-2
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Welding procedure qualification

ASME IX	AWS D1.1	EN 15614
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Design · steel structures

EN 1090	AWS	CSA S16	AS/NZS
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Design · stacks & chimneys

ASME STS-1	EN 13084	Eurocodes
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Design · pressure equipment

PED	ASME	GOST	ARH
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