



RTT GROUP

BLADON 12KW MICRO TURBINE GENSET
TECHNICAL SPECIFICATION

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**TECHNICAL
SPECIFICATION**



POWER. TRANSFORMED.

The Bladon Micro Turbine genset is no ordinary genset. It shares some characteristics with conventional diesel gensets but it has some unique specifications and features that separates its performance, reliability and its overall total cost of ownership.



UP TO 8,000 HOUR SERVICE INTERVALS

- Up to 90% fewer site visits
- No lubricant or liquid coolant
- Minimal replacement parts make services simple and low cost



FUEL FLEXIBILITY

- Use diesel, kerosene, paraffin or mix them
- Lowers fuel costs
- Deter fuel theft through mixing diesel with kerosene



SECURE BY DESIGN

- Hardened cabinet
- Single service door access
- Tamper-proof internal hinges
- No reusable parts for traditional diesel gensets



REDUCED ENVIRONMENTAL IMPACT

- World's only EURO V Compliant 12kW Diesel Genset
- Quietest genset at <65dB at 1m
- Ultra low vibration

BLADON 12KW MTG - TECHNICAL SPECIFICATIONS

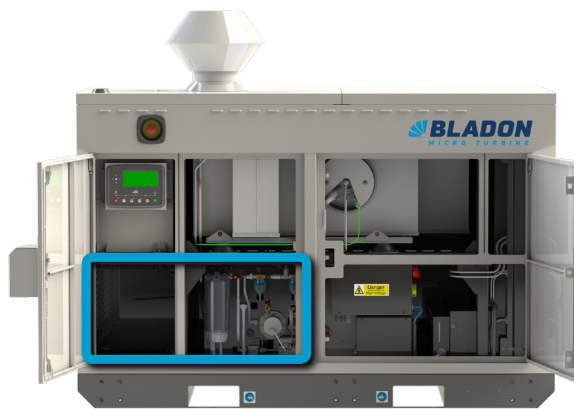
POWER	STANDBY	PRIME	BACK-UP	VOLTAGE	FREQUENCY
Nominal Power*	12kW (15kVA equivalent)			230 V single phase	50 Hz
Power Quality**	Pure Sine wave inverter power output with power factor ~1.0, designed to operate with telecom rectifiers				
Nominal Electrical Efficiency @25°C	25%				
Load %	25%		50%	75%	100%
Fuel Consumption (l/h)	2.1		3.0	3.8	4.9
Installation	Indoor or Outdoor locations On grid parallel or Off grid remote operation				
Key Features	No oils or liquid coolants Variable speed microturbine Long Service Intervals - up to 8,000 hours Low cost Service Low Cost fuel options e.g. kerosene or paraffin Low Noise and Vibration World's only EURO V Compliant 12kW diesel genset, 80% less CO, 60% less NoX				

MICROTURBINE GENERATOR FEATURE SET

MTG Dimensions	2.1m(L) x 0.9m (W) x 1.1m(H) Excluding fuel tank and exhaust flue
Weight	< 700 kg Excluding fuel tank and batteries
Ambient Operating conditions	Temperatures: -10°C to +45°C Altitude: Up to 2000m with derating Solar irradiation: Up to 1000W/m ² Rain: Up to 150mm/hour

MINIMAL SERVICE COSTS

Service Interval*	Up to 8000 operating hours
Service Time*	2 hour average service time with minimal service parts

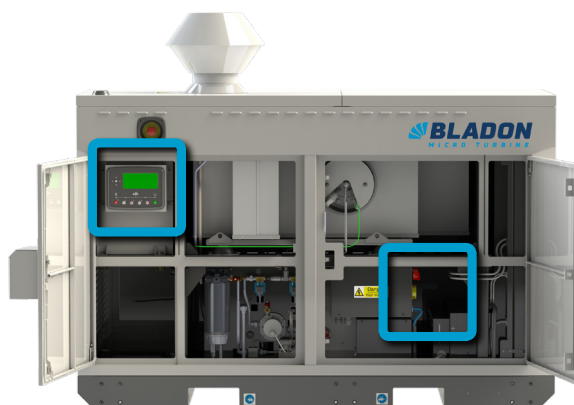


CONTROLLERS & MONITORING

Genset Controller	Deepsea DSE 7320 MKII II (with DSE 890 gateway option)
Genset Communications	Optional Deepsea DSE 890 gateway

Bladon have included the market leading genset controller from DeepSea Electronics to bring easy to use but powerful remote monitoring, management and control capabilities to the MTG. Using the DSE7320 MKII controller and optional DSE890 Gateway the MTG can be managed remotely further eliminating site visits.

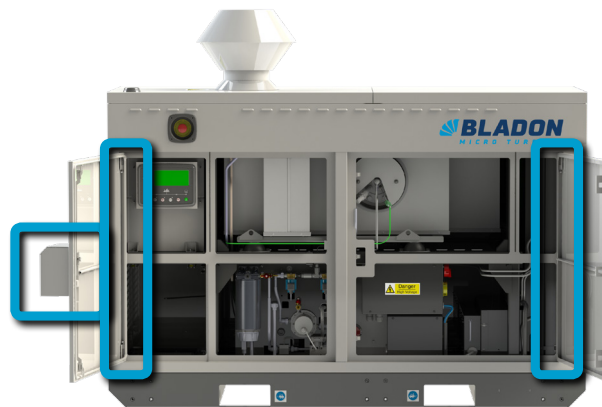
For on-grid applications optional mechanical Automatic Transfer Switch (ATS) internal to the MTG can be installed.



MTG CANOPY FEATURES

Enclosure/Canopy Features	Tamper proof hinges High Security shielded padlock hasp - for smartlocks/padlocks High Security multipoint locks and door alarm options Panels anti corrosion coated and painted Designed for service and easy component replacement and shallow access Vermin protection IP54 where required Deepsea controller behind service door with option for viewing window
Paint Options	External sun and weather proof RAL9018 , RAL7035 Leatherette. Other options available on request
Lifting	Top Lift or Fork lift

The Bladon MTG is secure by design with a fully hardened steel cabinet, single service door access, tamper proof internal hinges, hidden battery compartment, padlock hood which can take up to 12mm size padlocks or smartlocks.



FUEL TYPES	Options for up to 3000 litre bunded tank adjacent or sub-MTG installation
Liquid Fuels	Diesel EN590:2009 Kerosene K1 grade Diesel Kerosene Mix Biodiesel on request Paraffin on request
Gas Fuels	Natural Gas LPG Propane Butane CNG

MTG ENGINE/ALTERNATOR	
Variable Speed (Turbo Alternator)	Nominal 135,000 rpm (Microturbine) combustion driven
Generator Type	Non synchronous generator to inverter
Internal Battery/Starting Battery	40 Ah , 48V
Alternator Insulation	Class H
Heat Recovery	High efficiency recuperator (Heat Exchanger) - c. 90% effectiveness
Exhaust Gas Temperature	Typical maximum 250 °C at full load
Exhaust Emissions	Best in Class EU Regulation 1628 Stage V 2016
Oil	No oil required
Liquid Coolant	Micro Turbine is air cooled. No liquid coolant required
Noise & Vibration	Ultra-quiet operation as standard Class leading less than 65dBA @ 1m Low Noise versions down to 55 dBA @1m Essentially vibration free - Rotation only
Earthing	Ground connection point for electrical installation
Certification	Machinery Directive 2006/42/EC, CE, ISO 60204 Safety of Machinery, ISO 19372 Microturbine Safety, ISO 60034 rotating electrical machines, ISO 61000 EMC
Warranty	2 years or 5,000 running hours whichever comes first

OPTIONAL FEATURES	
Automatic Transfer Switch (ATS)	Mechanical ATS with DSE7320 MKII
Geo Tagging/ Geo Fencing	Configurable with DSE 890
Environmental enclosure and security options	Anti-theft security cage over on board batteries Full coastal/marine environment edition Desert edition Integrated Fuel tank

ABOUT BLADON

Bladon is a pioneer in the design, development and manufacture of Micro Turbine Gensets.

Bladon is the world's first manufacturer of microturbine gensets for the telecom market. The company has developed revolutionary patented microturbine, heat exchanger and air bearing technologies to deliver cost effective reliable power.

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**8,000 hours service life subject to suitable air and fuel quality.

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