

BARCLAY POWER GENERATION MODULE

K-SERIES

PRODUCT SPECIFICATION SHEET



DESCRIPTION

Barclay K-Series Gas Fuelled Power Generation Module
 1.5 MW - 2.5 MW @ 50Hz

OVERVIEW

Barclay Power Generation Modules are the latest in EGM design (Engine Generating Module). Australian designed and manufactured for installations across any power generation site internationally. Full vertical integration in packaging and installing the latest Caterpillar K-Series gas engines under a turnkey EPCM project.

POINTS OF DIFFERENCE

- › **Mission critical fast power:** Full power in 5 minutes (with pre-heat).
- › **Heat rate:** Lowest of any gas engine worldwide
- › **80,000 hours TBO:** More than any standard gas engine (9.6 years at base load before TBO)
- › **High heat rate threshold:** 45 deg C ambient before heat de-rates
- › **Fast delivery ex-factory in under 20 weeks:** (subject to gas engines ex-stock)
- › **Dual fuel:** Can operate on either natural gas or coal seam methane, including hydrogen blend.
- › **Base or follow load:** Well suited to either
- › **Barclays acoustic enclosures:** Leading edge attenuation design, 75db at 1 metre or less.
- › **Full EPCM:** Barclay/Genco are your EPCM turnkey (Engineering, Procurement, Construction, Management)
- › **Australian content:** Barclay EGM modules comply with local content rules (less engine)
- › **Barclay Genco Alliance reputation:**
 The BGA emanates from a proven performance legacy of 48+27 years success in international power generation projects. ISO accredited and QA approved by clients throughout Australia and internationally.



SPECIFICATION

Generator Set Specifications

Make	Leroy Somer generator ends
Output	1.5 – 2.5 MW (Can provide up to 3.0 MW+ for special applications)
Voltage	Either 415 V, 630 V or 11 KV
Frequency	50 Hz
Speed	1500 RPM
Control system	Refer CAT K-Series generator control system

PERTH
 12-16 Catalano Road, Canning Vale
 Western Australia 6155
MELBOURNE
 Suite 201, 175B Stephen Street
 Yarraville, Victoria 3013
T +61 8 9256 0900
E info@barclayeng.com.au
W www.barclayeng.com.au



Module Specifications	
Enclosure	Barclay acoustic enclosure, intake/discharge ducts, attenuators, moisture eliminators.
Engine	Caterpillar G3516K or G3520K
Engine control system	Ancillary engine controls by Motor Control Centre (MCC)
Generator control system	Fully automated to the Client's Control room
Remote monitoring	Remote monitoring 24/7 from anywhere worldwide
Cooling system	External radiators Australian manufactured, spec'd to suit the installation.
Exhaust system	Barclay roof mounted exhaust and muffler
Fire protection	Onboard fire detection and suppression.
Power protection	Onboard Air Circuit Breaker isolator (ACB), available if specified.
Fuel system	CAT gas train included
Fuel tank	n/a
Light and power services	Small general service light and power system with distribution board

INSTALLATION

EPCM (Engineering, Procurement, Construction, Management)

- › **All projects are supported by full in-house EPCM turnkey installation service:**
The Barclay Genco Alliance provides full vertical integration between manufacturer and installer. Normally EGM project works are best completed under an all-inclusive fixed price turnkey contract. Critically an all-inclusive EPCM project ensures that there is no blurred delineation of scope between multiple project suppliers, that otherwise frequently causes issues with ongoing post completion support and warranties.
- › **Reputation and Capability:**
The Barclay Genco Alliance represents a 48/27-year manufacturing and power-project legacy, with a performance and market reputation that speaks for itself.
- › **Mission Critical:**
From commissioning to duty cycle operational testing, the Barclay EGM module is P100 in reliability, this is its operational guarantee.
- › **N+1:** The design can integrate two (2x) modules in parallel for N+1, or P200 duty supply.
- › **Install and integrate:**
Barclay EGM modules integration into the Client existing infrastructure.
- › **FAT testing (Factory Acceptance Tests):**
The EGMs are load tested and commissioned at the factory with the client sign-off. When the EGMs are delivered to site they are 'duty ready'.
- › **Quality Assurance:**
Each installation includes a full QA management programme covering the build through to commissioning. QA includes four (4) Hold and Witness points (Base, Frame and Acoustics, FAT and Commissioning).
- › **Handover:**
In conjunction with the QA there is a full client handover including operational readiness training.
- › **Warranties and Maintenance:**
All installations are fully supported including the manufacturer's engine warranty. Ongoing general maintenance support contracts are available to suit the client's requirements.



Figure 1 and 2 - Enclosure base fabrication



Figure 3 – EDL, German Creek Power Station

Version	REV 0	Updated	12 December 2025
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