

SmartGen Remote Power Series

Benefits

Environmentally Robust

Multiple Fuel Sources

Zero Maintenance Generator

Quick Installation

Lower Cost/kW

Small Footprint

Long Operating Life

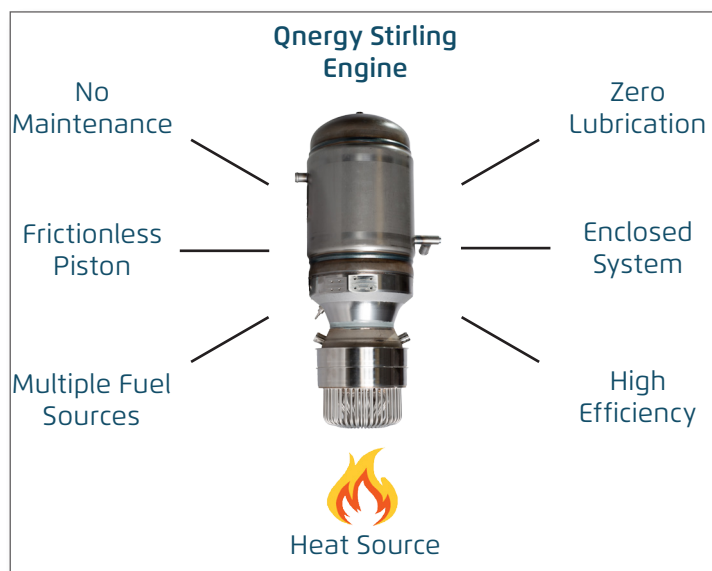


SmartGen Series

Designed for rugged and remote operation the Smartgen remote power generator series provides reliable electrical power supply to the most demanding and mission-critical loads. Based on Qnergy's no-maintenance and highly reliable PCK series Stirling engines, the generator package can work seamlessly with a variety of fuel supplies, including: natural gas, propane, ethane, biogas, as well as multiple associated gas streams. By means of its flexible and modular design, this generator package can be tailored to provide a broad range of power output architectures to meet the electrical requirements of each specific site load.

Manufactured using proven lean processes, the Smartgen is built to meet strict quality standards. The integrated components and controls are all designed to maximize the customer's ability to control and monitor the power-generation asset while minimizing servicing of any kind.

What Makes Qnergy SmartGen Your Remote Power Solution?



Applications

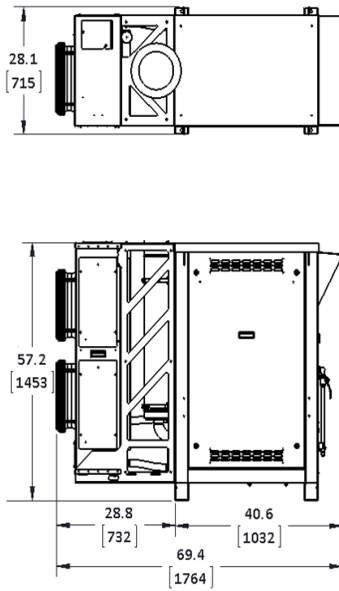
- Cathodic Protection
- SCADA
- Automation & Controls
- Remote Micro-Grid
- Power Backup
- Biogas to Electricity
- Telecommunication
- Enhanced Oil Recovery (EOR)



Each SmartGen Remote Power Systems utilizes Qnergy's unique PCK80 Stirling Generator

Qnergy has an experienced design and integration team that will work to meet your power needs!

SmartGen Base Dimensions (in/[mm])



SmartGen Specifications	
Max/Min Power Output ¹	6000 Watts / 1500 Watts
Allowable Fuel Caloric Value	750-3380 BTU/ft ³
Fuel Type	NG; LPG; Propane; Wellhead Gas (sweet)
Fuel Supply Pressure	3-50 psi Propane 2-10 psi
Max Fuel Consumption	NG (2.94 scfm) Propane (1.20 scfm)
Operating Temperature (Ambient)	0°F to 122°F (-15°C to +50°C)
Cabinet Electrical Rating	IP54
Altitude ²	5,000 ft
Maintenance ³	Semi-Annually
Certification	cETLus to UL2200 CSA C22.2 #14 CSA C22.2 #10
Weight	680 lbs (310 kg)

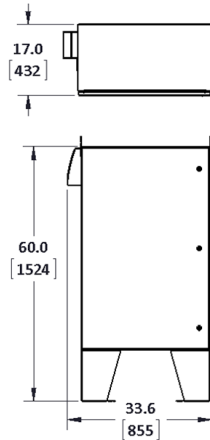
¹ At 15°C Ambient, Efficiency varies with load

² Above 5000ft power output will de-rate by 5% per 1000ft

³ Dependant upon operating hours, minor maintenance activities

Additional Configuration Options to Meet Your Needs:

Example: Configuration C Enclosure Dimensions (in/[mm])



PIP Specifications	Configuration A	Configuration B	Configuration C	Configuration D
Description	On-Grid Inverter	Off-Grid Inverter	Battery Assisted Power Supply	Cycle Charger
Voltage Output	480V 3ph or 208V/230V 1ph	220V 1ph	24/48 V ¹	24/48 V ¹
Nominal Power Output	5500 Watt 3ph 5000 Watt 1ph	5500 Watt 3ph 5000 Watt 1ph	4500 Watt ² (24V) 6000 Watt ² (48V)	4500 Watt ² (24V) 6000 Watt ² (48V)
Peak Output ³	N/A	N/A	200A	200A
Max Output Current	---	---	160A	160A
Battery Capacity	N/A	N/A	Internal, 4x 12V 40Ah	External, up to 20,000Ah
Battery Type	N/A	N/A	AGM, GEL	AGM, GEL, Flooded
Weight	77 lbs (35 kg)	57 lbs (26 kg)	410 lbs (185 kg) ⁴	285 lbs (130 kg)
Ambient Temperature	-40°C to 60°C	-40°C to 60°C	-20°C to 55°C	-20°C to 55°C
Environmental Protection	NEMA 4X	NEMA 4X	NEMA 4	NEMA 4

¹ 22-28.8V / 44-57.6V (depending upon battery state of charge)

² AGM batteries, bulk voltage 28.6V, 25°C ambient, 57.2V, 25°C ambient

³ Time duration depends on battery capacity

⁴ Including 4 batteries

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Qnergy is a company focused on providing energy to a world market looking for innovative, cost effective, and efficient ways to energize the future. With more than 40 years of expertise and proven reliability, Qnergy brings proprietary, high-performance Stirling engine technology to the marketplace for commercial, industrial, and residential applications.

How It Works

Using a highly efficient thermodynamic process, Qnergy's free-piston Stirling engine (FPSE) generator can create electricity from virtually any heat source. The heat input creates a temperature differential across the engine causing the helium inside the engine to expand and contract, which in turn drives a linear reciprocating motion of the piston. The FPSE directly converts the reciprocating motion of the piston into electrical power via the integral linear alternator.

The Qnergy engine has fewer moving parts than traditional kinematic Stirling engines, and no direct-contact points that cause wear and require lubrication. Thus, the Qnergy engine is truly a maintenance-free technology that offers long-life performance, two key features that make it an ideal power source.