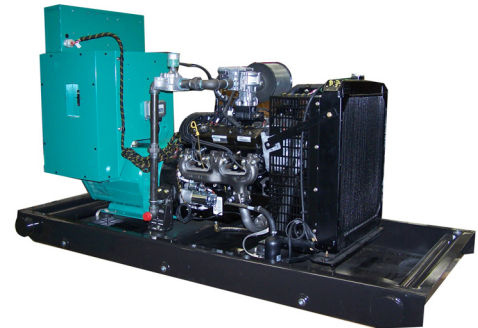




Specification sheet

Gaseous fuel generator set

5.7L engine series
55 kW 60 Hz



Description

The Cummins 5.7L engine series commercial generator set (GenSet) boasts a fully-integrated power generation system providing optimum performance, reliability and versatility for prime power applications.

Features

- Power Solutions International (PSI) industrial engine - rugged 4-cycle industrial spark-ignited engine delivers reliable power, low emissions, and quick response to load changes
- Stamford rugged and reliable alternator with state-of-the-art technology
- One-year warranty supported by a worldwide Cummins twenty-four hour, seven days-a-week distributor network
- Accepts 100% rated load in a single step
- Surge rating - 110% of nameplate
- The GenSet accepts full rated load in a single step in accordance with NFPA 110 Type 10 (ten seconds) for Level 1 and Level 2 Emergency or Standby Power Supply Systems (EPSSs)
- Designed, tested, and certified to applicable CSA standards (See Fuel installation requirements on page 4)
- Efficient and localized operation monitoring and control options:
 - Modbus over the Internet (monitor and control)
 - Remote HMI (monitor and control)
 - Field server reliable interface to a building management system Supervisory Control and Data Acquisition (SCADA) (monitor, only)

Model	Continuous power rating*		Emissions compliance	Engine data sheet
	Propane 60 Hz kW (kVa)	NG 60 Hz kW (kVa)		
C55N6C	55 (69)	55 (69)	EPA Stationary and MOH Certified	PSI 36300018

* Tested at 0.8 power factor (PF) per NFPA 110.

GenSet specifications

Voltage regulation, no load to full load	±1%
Random voltage variation	±1% (three-phase only)
Frequency regulation	Isochronous
Random frequency variation	±0.5%
Radio frequency interference	Optional PMG excitation operates in compliance with BS800 and VDE level G and N. Addition of RFI protection kit allows operation per MIL-STD-461 and VDE level K.

Engine specifications

Base Engine	Power Solutions International (PSI)
Displacement	5.7 L (348 in ³)
Overspeed Limit	2100 rpm
Regenerative Power	6.62 kW
Cylinder Block Configuration	Cast iron
Cranking Current	630 amps at ambient temperature of -18 °C (0 °F)
Battery Charging Alternator	70 amps
Battery Type	Group 24 (x1)
Starting Voltage	12-volt, negative ground
Standard Cooling System	See derates on Engine Data Sheet
Lube Oil Filter Types	One spin-on canister-combination full flow with bypass

Alternator specifications

Design	Brushless, 4-pole, drip-proof revolving field
Stator	2/3 pitch
Rotor	Direct-coupled by flexible disc
Insulation System	Class H per NEMA MG1-1.65 or better
Standard Temperature Rise*	105 °C
Exciter Type	Shunt or Permanent Magnet Generator (PMG)
Phase Rotation	A (U), B (V), C (W)
Alternator Cooling	Direct-drive centrifugal blower

* For UL 1004 ratings, refer to temperature rise at 120 °C or below, and ambient temperature up to 40 °C

Full-load amperage (FLA) at rated voltage

Model	Rating	Voltage*								
		120/240 (1 Ph)	120/208	127/220	139/240	220/380	240/416	254/440	277/480	347/600
C55N6C	Propane	229	191	180	165	104	95	90	83	66
C55N6C	NG	229	191	180	165	104	95	90	83	66

*Three-phase FLA based on 0.8 power factor (PF).

Rated load fuel consumption in standard cubic feet per hour (CFH)*

Model	Rating	Fuel type	100% Load	75% Load	50% Load	25% Load
C55N6C	Prime	Propane	267	226	173	89
C55N6C	Prime	NG	744	631	483	245

*See Fuel installation requirements on page 4.

Fuel inlet pressure, measured at the regulator inlet, must be 180 to 280 mm WC (7 to 11 in. WC).

PowerCommand 1.1 control system



The PowerCommand Control is an integrated GenSet control system providing voltage regulation, engine protection, operator interface and isochronous governing (optional). The integration of all functions into a single control system provides enhanced reliability and performance compared to conventional GenSet control systems. Prototype tested; UL, CSA, and CE compliant.

The PowerCommand control system includes:

Features

- InPower PC-based service tool available for detailed diagnostics.
- Battery monitoring and testing features and smart starting control system.
- Standard PowerCommand Control Network (PCCNet) interface to devices such as remote annunciator for NFPA 110 applications.

Environmental conditions

- Control boards potted for environmental protection.
- Ambient operating temperature from: -40 to +70 °C (-40 to 158 °F). HMI from -20 to +70 °C (-4 to 158 °F).
- Operating altitude up to 4000 m (13,000 ft.).

AC protection

- Field overload.
- Over current warning and shutdown.
- Over and under voltage shutdown.
- Over and under frequency shutdown.
- Over excitation (loss of sensing) fault.
- Integrated digital electronic voltage regulator.

Digital voltage regulation

- Three-phase line-to-line sensing.
- Configurable torque matching.
- Integrated digital electronic voltage regulator.

Engine data

- DC voltage battery charge.
- Adjustable lube oil pressure.
- Adjustable engine idle speed.
- 12/24 VDC battery configuration.

Alternator data

- 50/60 Hz frequency.
- Three-phase AC current.
- AC: Single or three-phase line-to-line or line-to-neutral.
- Digital output voltage regulation within +/-1.0% any loads between no load to full. Drift equals no more than +/-1.5% for 40 °C (104 °F) temperature change in eight hours.

Control functions

- Cycle cranking.
- PCCNet interface.
- Configurable inputs (2).
- Configurable outputs (2).
- Remote emergency stop.
- Time delay start and cooldown.

Engine protection

- Cranking lockout.
- Overspeed shutdown.
- Fail to start (overcrank) shutdown.
- Fail to crank shutdown.
- Sensor failure indication.
- Redundant start disconnect.
- Low fuel level warning or shutdown.
- Low oil pressure warning and shutdown.
- High coolant temperature warning and shutdown.
- Low coolant level warning or shutdown.
- Low coolant temperature warning.
- High, low, and weak battery voltage warning.

Operator/display panel

- Manual off switch.
- Bargraph display (optional).
- LED lamps indicating GenSet running, not in auto, common warning, common shutdown, manual run mode, and remote start.
- Alphanumeric display with pushbutton access for viewing engine and alternator data and providing setup, controls and adjustments (English or international symbols).

Other display data

- Fault history.
- GenSet model data.
- RS485 Modbus interface.
- Start attempts, starts, running hours.
- Data logging and fault simulation (requires InPower service tool).

Control options

- Remote operator panel.
- PMG alternator excitation.
- AC output analog meters (bargraph).
- Auxiliary output relays (2).
- Modbus to BACnet Module.
- 120/240 V, 100 W anti-condensation heater.
- Remote annunciator with configurable inputs (3) and configurable outputs (4).
- Auxiliary, configurable signal inputs (8) and configurable relay outputs (8).
- PowerCommand 2.2 control with AmpSentry protection.

GenSet options and accessories

Engine

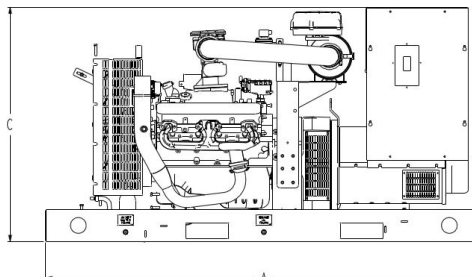
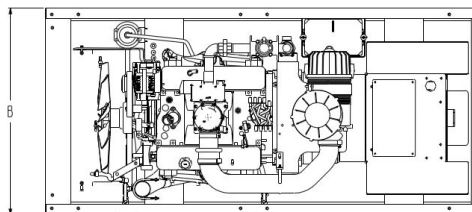
- 120/240 V, 1500 W coolant heaters
- 120 V, 150 W lube oil heater

Fuel system - flexible fuel connector and fuel strainer

Exhaust system - GenSet roof-mounted muffler (enclosure models, only)

Generator set

- Battery
- Battery charger
- Main line circuit breaker
- ABB EMAX E.O. generator breaker
- Modbus to BACnet Module
- Audible alarm
- Remote drains
- Oil maintainer
- Remote annunciator panel
- Spring isolators



This outline drawing is for reference only.
Do not use for installation design.

	Dim "A" mm (in.)	Dim "B" mm (in.)	Dim "C" mm (in.)
C55N6C	2083 (82)	991 (39)	1118 (44)

NOTE: Consult drawings for applicable weights. See enclosure Specification Sheet for enclosure dimensions.

Codes and standards



CSA Group tests products under a formal process to ensure that they meet the safety and/or performance requirements of applicable standards. This GenSet is certified to: CSA 22.2 No. 100 Motors and Generators; CSA 22.2 No. 0.4-044 Bonding of Electrical Equipment; CSA 22.2 No. 14 Industrial Control Equipment; and CSA 22.2 No. 0 General Requirements - Canadian Electrical Code, Part II. (See Fuel Installation Requirements on this page.)



Engine is certified to Non-Emergency U.S. EPA New Source Performance Standards (NSPS), 40 CFR 60 subpart JJJJ. U.S. applications must be applied per EPA regulations.

Engine is certified to Mobile Non-Emergency U.S. EPA New Source Performance Standards (NSPS), 40 CFR 60 subpart JJJJ. U.S. applications must be applied per EPA regulations.



This product has been manufactured under the controls established by a Bureau Veritas Certification approved management system that conforms to ISO 9001:2015.

Fuel installation requirements

Gas supply pressure is specified at the inlet to the on-engine regulator or the electronic pressure regulator (EPR). As standard equipment, one fuel shut-off (FSO) valve is located upstream from the regulator on this unit. Additional options added to the fuel train, such as those for CSA or UL compliance, and/or flexible fuel connections or strainers, add restriction that must be considered when determining gas supply pressure.

Ratings definitions

Emergency Standby Power (ESP):

Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power is in accordance with ISO 3046, AS 2789, DIN 6271, and BS 5514.

Prime Power (PRP):

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271, and BS 5514.

Base Load (Continuous) Power (COP):

Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) is in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271, and BS 5514.

Demand Response Power Rating - Spark Ignited Gas (DRP):

Applicable for supplying electrical power in parallel with commercially available power in variable and non-variable load applications. This fuel rating is intended for use in situations where power outages are contracted, such as in utility power curtailment. Engine operation is limited to a total of 500 hours per year. Engines may be operated in parallel to the public utility for up to 500 hours per year, with an average load factor no greater than 80% of rated Demand Response Power. Engines with Standby Power ratings available can be run in Emergency Standby applications up to the Standby Power rating for up to 50 hours per year. The customer should be aware, however, that the life of any engine will be reduced by constant high load operation.

Warning: Backfeed to a utility system can cause electrocution and/or property damage. Do not connect GenSets to any building electrical system except through an approved device or after the building main disconnect is open. Neutral connection must be bonded in accordance with National Electrical Code.

Specifications are subject to change without notice.

Power You Can Rely On

To order, contact centralregionorders@cummins.com.



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