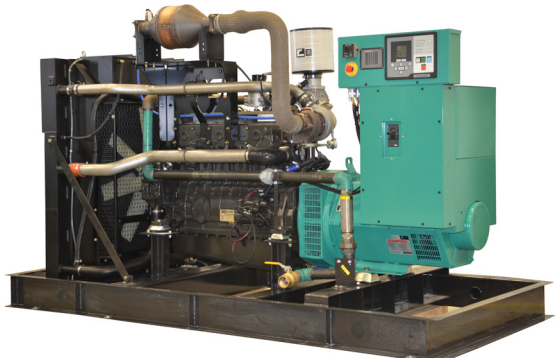
Specification sheet

Gaseous Fuel Generator Set

11.1L Engine Series

130 kW - 200 kW 60 Hz



Description

The Cummins Inc. commercial Generator Set (GenSet) is a fully integrated power generation system providing optimum performance, reliability, and versatility for stationary standby and prime power applications.

Features

Power Solutions International (PSI) Heavy-Duty Engine - Rugged 4-cycle industrial spark-ignited engine delivers reliable power, low emissions, and quick response to load changes.

Alternator - Several alternator sizes offer selectable motor-starting capability with low reactance 2/3 pitch windings, low waveform distortion with non-linear loads, fault-clearing short-circuit capability, and class H insulation.

Control System - The PowerCommand® electronic control is standard equipment and provides total GenSet system integration, including automatic remote starting/stopping, precise voltage regulation, alarm and status message display, output metering, and auto-shutdown at fault detection.

Warranty and Service - Backed by a one-year warranty and worldwide distributor network.

National Fire Protection Association (NFPA) - 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).

	Standby rating*		Prime rating			
Model	Propane 60Hz kW (kVa)	NG 60 Hz kW (kVa)	60 Hz kW (kVa)	50 Hz kW (kVa)	Emissions Compliance	Data Sheet
C200N6	130 (163)	200 (250)			EPA SI NSPS Stationary Emergency Certified	PSI 36300018
			180 (225)		EPA Stationary and MOH Certified	PSI 36300018

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

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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	11.1 L (677 in^3)
Overspeed Limit	2100 rpm
Regenerative Power	11 kW
Cylinder Block Configuration	Cast iron
Cranking Current	900 amps at ambient temperature of 0 °C (32 °F)
Battery Charging Alternator	45 amps
Battery Type	4D (x2)
Starting Voltage	24-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
Total System Back Pressure Allowed	76 mm Hg (3 in. Hg)
Catalyst Back Pressure	38 mm Hg (1.5 in. Hg)
Silencer Back Pressure (Factory Enclosed Units Only)	15 mm Hg (.59 in. Hg)

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 *	125 °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

Amp Rating at Full-load Voltage

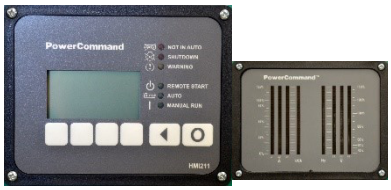
	Full Load Voltage		120/240 (1 Ph)	120/208	127/220	139/240	220/380	240/416	254/440	277/480	347/600
C200N6	Propane	**Amps**	N/A	451	426	391	247	226	213	195	156
	Prime NG	**Amps**	N/A	625	590	541	342	312	295	271	217
	Standby NG	**Amps**	N/A	694	656	601	380	347	328	301	241

Fuel Consumption

		Rated Load Fuel Consumption in Standard Cubic Feet per Hour (CFH)			
Model	**Fuel Type**	**1/4**	**1/2**	**3/4**	**Full**
C200N6	Propane	244	488	651	814
	Prime NG	518	1341	1630	2043
	Standby NG	635	1269	1692	2115

Fuel inlet pressure at GenSet connection: 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:

Environment

- Ambient operating temperature from: -40 to +70 ºC (-40 to 158 ºF). HMI from -20 to +70 ºC (-4 to 158 ºF).
- Operating altitude up to 5000 m (13,000 ft.).

Features

- Control boards potted for environmental protection.
- 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.

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

- 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 ºC (104 ºF) 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).
- Color-coded graphical display of: kVa, Frequency, 3-phase current, and three-phase AC voltage
- Auxiliary output relays (2).
- Modbus® to BACnet™ Module.
- ComAp InteliGen^{NTC} parallel controller.
- 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

- 120/240/480 V, 2500 W coolant heaters
- 120 V, 400 W lube oil heater

Fuel System

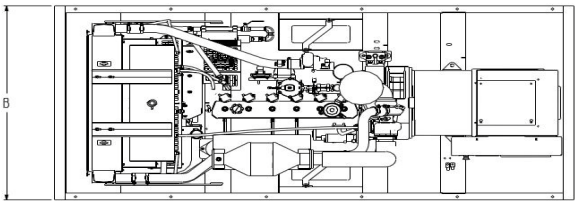
- Flexible fuel connector and fuel strainer

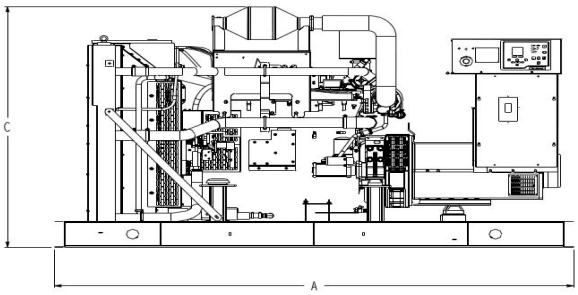
Exhaust System

- GenSet mounted muffler (enclosure models, only)

Generator Set

- Batteries and battery charger
- Main line circuit breaker
- PowerCommand® Network Input/Output (I/O) Module
- Modbus® to BACnet™ Module
- Weather protective enclosure (F001) with silencer
- Level I enclosure w/silencer (C180N6 only)
- Level II enclosure w/silencer
- Audible alarm; remote drains; oil maintainer
- Remote annunciator panel and spring isolators
- 2-year standby and 5-year basic power warranty (model-specific)





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.)
C200N6 Standby	3124 (123)	1524 (60)	1886 (74)
C200N6 Prime	4039 (159)	1626 (64)	1892 (75)

NOTE: Consult drawings for applicable weights. Contact the factory for additional information. See enclosure Specification Sheet for enclosure dimensions.

Codes and Standards

Codes or standards compliance may not be available with all model configurations - consult factory for availability.

The Prototype Test Support (PTS) program verifies the performance integrity of the GenSet design. Products bearing the PTS symbol have been subjected to demanding tests in accordance with NFPA 110 to verify the design integrity and performance under both normal and abnormal operating conditions. These conditions include: short circuit, endurance, temperature rise, torsional vibration, and transient response, as well as full load pickup.

Engine is certified to Stationary Emergency U.S. EPA New Source Performance Standards (NSPS), 40 CFR 60 subpart JJJJ.

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

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.

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.

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

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.

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.

Sales and Service

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