

# Spark-ignited generator set GG3.0L series



> **Specification sheet**  
20 - 30 kW standby

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## Description

Cummins Power Generation commercial generator sets are fully integrated power generation systems providing optimum performance, reliability and versatility for stationary standby and prime power applications.



This generator set is designed in facilities certified to ISO 9001 and manufactured in facilities certified to ISO 9001 or ISO 9002.



The Prototype Test Support (PTS) program verifies the performance integrity of the generator set design. Cummins Power Generation products bearing the PTS symbol meet the prototype test requirements of NFPA 110 for Level 1 systems.



All low voltage models are CSA certified to product class 4215-01.



The generator set is available Listed to UL 2200, Stationary Engine Generator Assemblies.

## Features

**GM heavy-duty gas engine** - Rugged 4-cycle, industrial spark-ignited delivers reliable power. The electronic governor provides fast 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 and fault clearing short-circuit capability.

**Control system** - The PowerCommand® electronic control is standard equipment and provides total genset system integration including automatic remote starting/stopping, precise frequency and voltage regulation, alarm and status message display, AmpSentry™ protection, output metering, auto-shutdown at fault detection and NFPA 110 Level 1 compliance.

**Cooling system** - Standard cooling package provides reliable running at up to 53 °C (127 °F) ambient temperature at the rated power level.

**Enclosures** - Optional weather protective and sound attenuated enclosures are available.

**NFPA** - The genset accepts full rated load in a single step in accordance with NFPA 110 for Level 1 systems.

**Warranty and service** - Backed by a comprehensive warranty and worldwide distributor network.

Model	Natural gas				Propane				Data sheets	
	Standby rating		Prime rating		Standby rating		Prime rating			
	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz	50 Hz
<b>GGMA</b>	20.0 (25.0)		18.0 (23.0)		20.0 (25.0)		18.0 (23.0)		D-3390	
<b>GGMB</b>	25.0 (31.0)		22.0 (28.0)		25.0 (31.0)		22.0 (28.0)		D-3391	
<b>GGMC</b>	29.0 (36.0)		26.0 (32.5)		30.0 (38.0)		26.0 (32.5)		D-3392	

## Generator set specifications

Governor regulation class	ISO 8528 Part 1 Class G3
Voltage regulation, no load to full load	± 1.0%
Random voltage variation	± 1.0%
Frequency regulation	Isochronous
Random frequency variation	± 0.5% @ 60 Hz
Radio frequency emissions compliance	Meets requirements of most industrial and commercial applications

## Engine specifications

Design	Naturally aspirated
Bore	101.6 mm (4.0 in)
Stroke	91.4 mm (3.6 in)
Displacement	3.0 litres (181 in <sup>3</sup> )
Cylinder block	Cast iron, in-line 4 cylinder
Battery capacity	420 amps minimum at ambient temperature of 0 °C (32 °F)
Battery charging alternator	60 amps
Starting voltage	12 volt, negative ground
Lube oil filter type(s)	Spin-on full flow
Standard cooling system	53 °C (127 °F) ambient cooling system

## Alternator specifications

Design	Revolving field, single bearing, 4 pole, brushless, drip proof construction
Stator	Skewed stator and 2/3 pitch windings minimize field heating and voltage harmonics
Rotor	Dynamically balanced assembly. Direct coupled to engine by a flexible drive disc. Complete amortisseur (damper) windings help minimize voltage deviations and heating effects under unbalanced loads. The rotor is supported by a pre-lubricated, maintenance-free ball bearing
Insulation system	Class H per NEMA MG1-1.65 and BS2757
Standard temperature rise	At rated load is less than 125 °C (257 °F) at standby rating, per NEMA MG1.22.40, IEEE 115 and IEC 34-1
Exciter type	The excitation system derives its power from the main output of the generator, eliminating the need for a separate excitation power source
Phase rotation	A (U), B (V), C (W)
Alternator cooling	Direct drive centrifugal blower
AC waveform total harmonic distortion	< 5% no load to full linear load, < 3% for any single harmonic
Telephone influence factor (TIF)	< 40 per NEMA MG1-22.43
Telephone harmonic factor (THF)	< 3

## Available voltages

### 60 Hz

Reconnectable	Non-Reconnectable	
	1-phase	3-phase
3-phase	1-phase	3-phase
<ul style="list-style-type: none"> <li>• 120/208</li> <li>• 127/220</li> <li>• 240/416</li> <li>• 277/480</li> </ul>	<ul style="list-style-type: none"> <li>• 120/240 delta</li> <li>• 139/240</li> <li>• 254/440</li> </ul>	<ul style="list-style-type: none"> <li>• 120/240</li> <li>• 220/380</li> <li>• 347/600</li> </ul>

Note: Consult factory for other voltages.

## Generator set options and accessories

### Engine

- 120/240 V 1500 W coolant heaters
- Heavy duty air cleaner

### Fuel system

- Propane vapor withdrawal
- Natural gas
- Propane liquid withdrawal

### Alternator

- 12 lead, broad range (full single phase output)
- Single phase (4 lead)
- 105 °C (221 °F) rise alternator (prime)
- 125 °C (257 °F) rise alternator (standby)

### Generator set

- Batteries
- Battery charger
- Coolant drain extension
- Oil drain extension
- Duct adapter
- Enclosure, aluminum weather protective, with critical silencer

- Export box packaging
- Main line circuit breakers
- UL 2200 Listed
- 2 year prime power warranty
- 2 year standby warranty
- 5 year basic power warranty
- 5 year comprehensive warranty

Note: Some options may not be available on all models - consult factory for availability.

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## Control system

### PowerCommand (1301) control

- The PowerCommand Control is an integrated generator set control system providing isochronous governing, voltage regulation, engine protection, generator protection and operator interface functions.
- Control provides battery monitoring and testing features, and smart starting control system.
- InPower™ PC-based service tool available for detailed diagnostics.
- Standard PCCNet RS485 network interface to devices such as remote annunciator for NFPA110 applications.
- Control boards are potted for environmental protection.
- Suitable for operation in ambient temperatures from -40 °C to +70 °C (-40 °F to +158 °F), and altitudes to 5000 m (13,000 ft).
- Prototype tested; UL, CSA and CE compliant.

### AC protection

- Over current warning and shutdown\*
- Over and under voltage shutdown
- Over and under frequency shutdown
- Over excitation
- Field overload

### Engine protection

- Overspeed 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\*
- Fail to start (overcrank) shutdown
- Fail to crank shutdown
- Redundant start disconnect
- Cranking lockout
- Sensor failure indication
- Low fuel pressure warning\*

### Operator/display panel (optional)

- Manual off switch
- Alpha-numeric display with pushbutton access, for viewing engine and alternator data and providing setup, controls and adjustments (English or international symbols)
- LED lamps indicating genset running, not in auto, common warning, common shutdown, manual run mode, remote start
- Suitable for operation in ambient temperatures from -20 °C to +70 °C (-4 °F to 158 °F).

### Alternator data

- Line-to-line and line-to-neutral AC volts\*
- Three phase AC current\*
- Frequency\*
- Total kVA\*

### Engine data

- DC voltage\*
- Lube oil pressure\*
- Coolant temperature\*

### Other data

- Genset model data
- Start attempts, starts, running hours
- Fault history
- RS485 Modbus® interface
- Data logging and fault simulation (requires InPower Service Tool)

### Digital governing (optional)

- Integrated digital electronic isochronous governor
- Temperature dynamic governing

### Digital voltage regulation

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

### Control functions

- Time delay start and cooldown
- Cycle cranking
- (2) configurable inputs
- (2) configurable outputs
- Remote emergency stop

### Options

- Local operator/display panel
- Digital electronic governing
- Auxiliary output relays (2)
- 120/240 V, 100 W anti-condensation heater
- Emergency stop switch
- Remote annunciator with (3) configurable inputs and (4) configurable outputs
- PowerCommand for Windows remote monitoring software (direct connect)
- Auxiliary, configurable signal inputs (8) and configurable relay outputs (8)



**Standard operator panel**



**Optional operator/display panel**

\* Optional Operator/Display Panel required to display warnings and sensor data, and for NFPA 110 and CSA 282 applications.

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## 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 in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

### Limited-time running power (LTP):

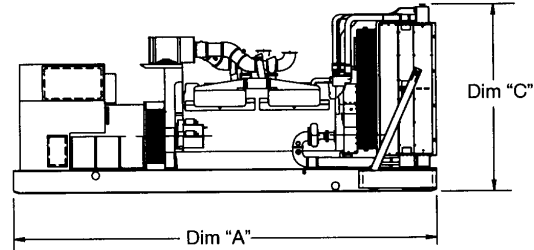
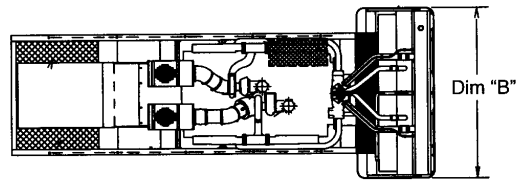
Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528.

### 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) in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.



This outline drawing is for reference only. See respective model data sheet for specific model outline drawing number.

***Do not use for installation design***

Model	Dim "A" mm (in.)	Dim "B" mm (in.)	Dim "C" mm (in.)	Set Weight* dry kg (lbs)	Set Weight* wet kg (lbs)
<b>GGMA</b>	1626 (64.0)	762.0 (30.0)	889.0 (35.0)	418 (922)	434 (956)
<b>GGMB</b>	1626 (64.0)	762.0 (30.0)	889.0 (35.0)	440 (970)	455 (1004)
<b>GGMC</b>	1626 (64.0)	762.0 (30.0)	889.0 (35.0)	507 (1117)	522 (1151)

\* Weights represent a set with standard features. See outline drawings for weights of other configurations.

### Cummins Power Generation

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**Warning:** Back feed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open.

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