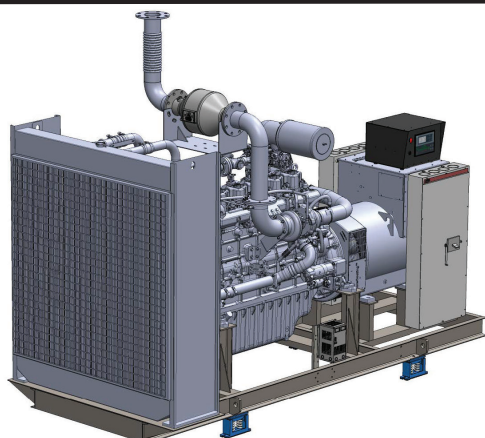


Version Code: A02


- 400 **kWe**
- 208 - 600 **Volt**
- 60 **Hz / 1800 RPM**
- Natural Gas **Fuel Type**
- Standby **Application**

RATINGS

	VOLTAGE	Hz	PHASE	PF	PRIME POWER 105°C		STANDBY POWER 125°C		Standard Breaker*	Oversized Alternator Available
					kW/kVa	Amps	kW/kVa	Amps		
☐	120/240 V	60	1	1	N / A	---	N / A	---	---	---
☐	120/208 V	60	3	0.8	CALL	---	450 / 563	1561	1600A (100%)	N / A
☐	139/240 V	60	3	0.8	CALL	---	450 / 563	1353	1600A (100%)	OPTIONAL
☐	240/416 V	60	3	0.8	CALL	---	450 / 563	780	800A (100%)	N / A
☐	277/480 V	60	3	0.8	CALL	---	450 / 563	676	800A (100%)	OPTIONAL
☐	347/600 V	60	3	0.8	CALL	---	450 / 563	541	600A (100%)	OPTIONAL
☐	2400/4160 V	60	3	0.8	N / A	---	N / A	---	---	---

All ratings are based on ISO-8528-1 and ISO-3046-1 standards. Consult factory for other voltages/ratings.

Prime ratings are capable of 10% overload power for 1-hour in every 12-hours running.

*Other circuit breaker ratings are available.

STANDARD EQUIPMENT

Engine

- Radiator cooled unit mounted
- Pusher Fan & Fan Drive
- Starter & Alternator
- Oil Pump & Filter
- Oil Drain Extension with Valve
- Governor - Electronic Isochronous
- Battery System & Cables
- Air Cleaner (dry single stage)
- Flexible Fuel Connector

Generator

- Brushless Single Bearing
- Automatic Voltage Regulator
- $\pm .25\%$ Voltage Regulator
- 4 Pole, Rotating Field
- Class F Temperature Rise
- Class H Insulation
- 100% of Rated Load - One Step
- 5% Maximum Harmonic Content
- Nema MG 1, IEEE and ANIS Standards

Additional

- Microprocessor Based Digital Controller
- Generator Mounted, NEMA, Control Panel
- Base - Structural Steel
- Main Line Circuit Breaker
- Battery Charger
- Jacket Water Heater with Isolation Valves
- Vibration Isolation Mounts (Spring)
- Single Source Supplier
- 1 YR/1500 HR Standby Warranty



ENGINE SPECIFICATIONS

Model----- 20L-NG
 Make----- Power Solutions Int'l.
 Aspiration Type----- Charge Cooled Forced Ind.
 Cylinder Arrangement----- In-line 6
 Combustion Type----- Spark Ignition
 Displacement: in3(L) ----- 1,197 (19.6)
 Bore x Stroke: in(mm)----- 5.91 x 7.28 (150 x 185)
 Compression Ratio----- 10.5 : 1
 Governor Type----- ECU Isochronous
 0-100% Load Frequency Regulation-----
 Steady State Frequency Regulation-----
 Rated Speed:RPM----- 1800
 Gross Power:BHP(kWm)----- 764 (570)

FUEL SYSTEM

Fuel Type----- Natural Gas
 Supply Inlet Connection----- 4.0" ANSI-150#
 Min. Op. Press. at 100% Load:--- T.B.A.
 Max. Supply Piping Press. Drop: 1" w.c. at full load running

FUEL CONSUMPTION

Max Standby BTUH at 1000 BTU/Ft 3- 4,800,000
 Max Prime BTUH at 1000 BTU/Ft 3--- T.B.A.
 75% Standby BTUH at 1000 BTU/Ft 3- 3,751,000
 50% Standby BTUH at 1000 BTU/Ft 3- 2,778,000

EXHAUST SYSTEM

Engine Manifold Type----- Water Cooled
 Exhaust Flow: cfm (m3/min)----- 2,890 (82)
 Exhaust Temperature: °F (°C)--- 1,300 (704)
 Max Back Press: "wc (kPa)----- 30.5 (7.6)

EXHAUST EMISSIONS

Nitrogen Oxides(NOx)----- T.B.C.
 Particulate Matter (PM)----- 0.0 g/kw-hr
 NM Hydrocarbon (NMHC)----- 0.0 g/kw-hr
 Carbon Monoxide (CO)----- T.B.C.
 EPA Certification----- Stationary Emergency
 MOE Standby Compliant----- O. Reg. 524/98
 MOE Non-Emergency Compliant----- T.B.A.

ELECTRICAL SYSTEM

Starting Voltage: DCV----- 24
 Alternator Ratings:AMPS----- 55
 Min. Battery: QTY x CCA----- 2 x 1250 (BCI Size: 4D)

LIQUID CAPACITY

Total Oil System: USG (L)----- 16.5 (62)
 Engine Coolant: USG (L)----- 11 (42)
 Engine + Radiator Coolant: USG(L)- 47 (177)

LUBRICATION SYSTEM

Type ----- Full Pressure
 Oil Filter: QTY x Type----- 3 x Spin-On
 Oil Cooler----- Integral

COOLING SYSTEM

Cooler Type----- Unit-Mounted Radiator
 Max Ambient Temp: °C----- 50
 Water Pump Type----- Centrifugal
 Fan Type----- Pusher Type
 Fan Power: HP (kWm)----- 38 (29)

AIR REQUIREMENTS

Combustion Air: cfm (m3/min)----- 900 (25)
 Cooling Air: cfm (m3/min)----- 35,315 (1,000)
 Max Back Press: "wc (kPa)----- 0.5 (0.124)

HEAT REJECTION TO AMBIENT AIR

Engine: BTUM (kW)----- 2,025 (37)
 600V Alternator: BTUM (kW)----- T.B.A.

AC ALTERNATOR

Make ----- Stamford
 Type----- S5 Series
 Exciter Type----- Permanent Magnet
 Voltage Regulator----- MX321
 Winding Insulation----- Class H
 Stator Pitch----- 2 / 3
 Bearing: QTY, Type----- Single, Sealed
 Coupling----- Flexible Disc
 Amortisseur Windings----- Full
 V. REG. 0-100% Load: %----- +/- 0/5%
 Sustained Short Circuit----- 300% for 10 seconds

PEAK MOTOR STARTING kVa (600V Alternator)

Standard Alternator at 35% V-Dip-- 1650
 Standard Alternator at 15% V-Dip-- 540
 Oversize Alternator at 35% V-Dip-- 2090
 Overside Alternator at 15% V-Dip-- 680

AGC-150, ALL IN ONE GENERATOR CONTROLLER



Six different applications can be programmed:

Island Mode: Prime power with stand alone or synchronized generators

Automatic Mains Failure: Critical and emergency standby, black-start

Base-Load Fixed Power: Fixed kW setpoint with building load

Peak Shaving: Generator supplies peak load demand paralleled to the grid

Load Take-Over: Load is moved from grid power to generator power

Mains Power Export: Generator supplies power back to the grid.

- Easy to use powerful microprocessor controller with graphical anti-glare LDC display
- Synchronize 3 ways: Dynamic, Static, Close before Excitation
- CANbus, RS-485 Modbus RTU, Ethernet Modbus TCP/IP
- Smart Buttons: only the relevant function buttons appear
- 500 Event log / 500 Alarm log
- 3-Phase Sensing with +/- 1% accuracy
- Emulation mode for testing and commissioning

Measurements

AC Voltage (V)
 AC Frequency (Hz)
 AC Current (A)
 Power Factor (PF)
 Real Power (kW)
 Apparent Power (kVA)
 Reactive Power (kvar)
 Oil Pressure (psi)
 Coolant Temperature (C)
 Fuel Level (%)
 Engine Run Time (hrs)
 Engine Speed (rpm)

Panel Mounted Devices

Audible Alarm Horn
 Emergency Stop Button

Timers

Engine Start
 Engine Cooldown
 Oil Pressure Bypass
 Overcrank
 Cycle Crank

Digital Outputs

Generator Running
 Common Alarm
 Common Shutdown

Synchronizing Protection

Sync Check
 Reverse Power
 Breaker External Trip
 Breaker Command Failure
 Under/Over Excitation

Alarms

Not in Auto
 Low Engine Temperature
 High Engine Temperature
 Low Oil Pressure
 Low Fuel Level
 Day Tank Leak
 Underfrequency
 Overcurrent
 Undervoltage
 Low Battery Voltage
 High Battery Voltage
 Weak Battery
 Intake Damper Failure
 ATS Bypass / Not in Auto
 Breaker Not Closed
 Gas Valve Closed

Shutdowns

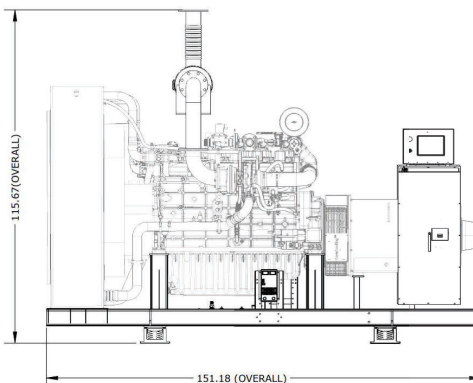
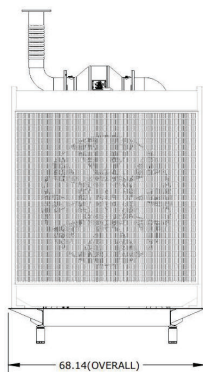
Overcrank
 Overspeed
 High Engine Temperature
 Low Oil Pressure
 Emergency Stop
 Low Coolant Level
 Underfrequency
 Overcurrent
 Undervoltage
 Overvoltage
 Sensor Fail / Wire-Break
 ECU Comms Fail

User Configurable

1x Analog Input
 6x Digital Input
 3x Digital Input

Complies with CSA-C282-19 Table 1 Requirements

GENERATOR SPECIFICATIONS



Open Unit Weight: Lbs. (kg)
 10,722 (4,874)

STANDARD FEATURES

- Alternator Protection
- Battery, Battery Rack and Cables
- 10A Automatic Battery Charger
- Local Emergency Stop Button
- Oil Drain Extension
- Standard Air Cleaner w/ Restriction Indicator
- Block Heater w/ Thermostat
- Radiator Duct Flange
- Engine Fluids
- Spring Vibration Isolators
- Submittal Package
- Owner's Manual
- 1-Year / 1500-Hour Parts & Labour Standby Warranty

AVAILABLE OPTIONS

Certifications and Specifications Available:

- ☐ ESA Electrical Certification
- ☐ ULC-S601 Sub-Base Fuel Tank Certification
- ☐ TSSA Sub-Base Fuel Tank Pre-Certification
- ☐ Seismic Approval
- ☐ CSA-C282 Compliance
- ☐ CSA-Z32 Compliance

Cooling System Options:

- ☐ Remote Radiator (Horizontal or Vertical Options)
- ☐ Heat Exchanger(s)

Controller Options:

- ☐ 8-Relay Output Board
- ☐ 16-Light Remote Serial Annunciator Panel
- ☐ Insight Remote Monitoring Service
- ☐ Protocol Converter

Fuel System Options:

- ☐ Sub-Base Fuel Tank (diesel/bi-fuel units only)
- ☐ Inlet Filter (natural gas/propane/bi-fuel units only)
- ☐ Stainless Steel Flexible Fuel Connector

Miscellaneous Options:

- ☐ Alternator Anti-Condensation Heater
- ☐ Seismic Mounts
- ☐ Crankcase Ventilation Filter
- ☐ Permanent Load Bank (Loose)
- ☐ Oversized Alternator for increased motor starting

Circuit Breaker Options:

- ☐ 100% CSA Current Rating
- ☐ Thermal-Magnetic Emergency Power Breaker
- ☐ Electronic LI Emergency Power Breaker
- ☐ Electronic LSI Emergency Power Breaker
- ☐ Electronic LSI Emergency Power Breaker
- ☐ Unit-Mounted Load Bank Breaker

Enclosure Options:

- ☐ Skin-Tight Sound Enclosure - ☐ Floor Plate
- ☐ Walk-In Sound Enclosure
- (All enclosures c/w internal exhaust silencer to match enclosure dBA rating)
- ☐ Exhaust Stack Extension, 1m above encl. roof (Loose)
- ☐ CSA-C282 Enclosure Pkg. (Heater, Lighting & Panel)
- ☐ Exterior Load Bank Camlock Connections

Exhaust Options for Indoor Units:

- ☐ Exhaust Silencer (various grades & style available)
- ☐ Stainless Steel Flexible Exhaust Connector

Paralleling Options:

- ☐ Motorized Circuit Breaker
- ☐ Master Interface Panel (Loose)
- ☐ Custom Switchgear Controls Only (Field-Installed)
- ☐ Custom Switchgear c/w Controls (Factory-Installed)

Testing Options:

- ☐ Extended Duration Factory Test
- ☐ Witness Factory Acceptance Test
- ☐ Rated Power Factor Test
- ☐ CSA-C282 On-Site Start-Up Testing

Warranty Options:

- ☐ 2-Year / 1500-Hour Parts & Labour Standby
- ☐ 5-Year / 1500-Hour Parts & 2-Year Labour Standby
- ☐ 5-Year / 1500-Hour Parts & Labour Standby
- ☐ 1-Year / Unlimited-Hours Parts & Labour Prime Power

Maintenance Options:

- ☐ Basic Spares Kit: Oil & Fuel Filters plus Drive Belts
- ☐ Weekly Contract to CSA-C282 Table-2
- ☐ Monthly Contract to CSA-C282 Table-3
- ☐ Semi-Annual Contract to CSA-C282 Table-4
- ☐ Annual Contract to CSA-C282 Table-5
- ☐ Quinquennial Contract to CSA-C282 Table-6

Looking for another option? Please contact Paramount Power Systems to find a suitable solution for you.