



500kW Containerized Diesel Generator Set

| Model | Emissions | Standby Rating | Prime Rating |
|----------|---------------|----------------|------------------|
| EGC-500C | EPA Certified | 60 Hertz | |
| | | 500kW (625kVA) | 450kW (562.5kVA) |



Standard Features

Cummins Heavy Duty Diesel Engine

- 4-cycle design, turbocharged, aftercooled, direct injection
- Polymide blade cooling fan
- Engine coolant heater
- Meets EPA Tier 2 emissions standards

Fuel System

- 800 gallon, single wall fuel tank
- Fuel priming system
- Fuel/water separators and drip pan
- Electric fuel run pump
- External fuel fill
- 30 micron Racor® fuel filter system

Alternator

- Brushless, 4-pole, synchronous, WYE connection
- Class H insulation system conforms to NEMA MG1-22, BS5000, CSA-C22-2, IEC-34-1 standards for temperature rise
- Drip-proof, self-venting, amortisseur windings
- Epoxy impregnated windings with tropical insulation for increased environmental protection and long life

Electronic Voltage Regulator

- Electronic automatic voltage regulator provides precise regulation
- Separate three-phase excitation for fast recovery from block loads and motor starting

Full Load Acceptance

- Accepts 100% of standby nameplate rating in one step, in compliance with NFPA, para 5-13.2.6

Generator Control Panel

- Basler vibration-isolated controller
- Manual or remote engine start/stop
- RS485/Modbus communication support
- Safety shutdowns
- Externally mounted emergency stop switch
- Generator mainline circuit breaker, 100% rated, electronically operated, UL listed

Specially Designed Container

- 20 ft. ISO container, sound-attenuated, foam-lined for extremely quiet operation
- Solidly mounted battery rack and cooling system
- Integral vibration isolators
- Exterior polyurethane coating system provides long life in extreme operating conditions
- Interior DC lights and timer switch
- Crankcase filtration system
- Critical grade silencer with heat blankets

Warranty

- Engine-generator sets are covered by an express written, one-year limited warranty



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APPLICATION DATA

Alternator Specifications

| | |
|--|-------------------------------------|
| Make | Marathon Magna Max |
| Type | 4-Pole, Rotating Field |
| Number of Leads | 10 or 12 |
| Generator Type | Rotating Field; PMG |
| Voltage Regulator | Solid State, Digital, Model DVR2000 |
| Insulation | NEMA MG1-1.66 |
| Material | Class H |
| Temperature Rise | 105°C / 130°C |
| Bearing: Number, Type | Single, Sealed |
| Coupling | Flexible Disk |
| Amortisseur Windings | Full |
| Excitation | Voltage Regulated, Brushless |
| Voltage Regulation (no load to full load) | 0.25% |
| One Step Load Acceptance % of rating per NFPA-110 | 100 |
| Generator Efficiency at Full Load | 93% |
| Phase Sequence | ABC (L1, L2, L3) |
| L-L Harmonic Max Total | 5.0% |
| L-L Harmonic Max Single | 3.0% |

The EGC500C Sound Attenuated Generator is configured for standard 60 Hz, 208V or 480V output. Special voltage outputs are available (special order).

Alternator Features

- All ratings tested per MIL-STD-705 as applicable.
- Generator protection for overload and short circuit.
- Generator is designed and built within NEMA, IEEE and ANSI standards for temperature rise.
- PMG exciter for superior regulation and response.
- Three phase sensing on regulator.
- Skewed rotor for smooth voltage wave form.
- Optional - Vacuum impregnated epoxy varnish, fungus resistant per MIL-I-24092.

Engine Specifications

| | |
|---------------------------------------|---|
| Manufacturer/Model | Cummins / QSX15-G9 |
| Engine Type | 4-cycle, Turbocharged, Air to Water Aftercooled |
| Cylinder Arrangement | 6 In-line |
| Displacement | 912 in ³ (15 L) |
| Bore | 5.39 in. (137 mm) |
| Stroke | 6.65 in. (169 mm) |
| Compression Ratio | 17 : 1 |
| Piston Speed (60Hz) | 1995 ft./min (10.1 m/sec) |
| Bearing Main: Number | 7 |
| Bearing Main: Type | Replaceable, Precision |
| Cylinder Block | Cast iron with wet, replaceable cylinder liners |
| Cylinder Head Material | Cast iron |
| Crankshaft Material | Forged steel |
| Brake Mean Effective Pressure (BMEP) | 360 psi (2482 kPa) |
| Rated RPM (60 Hz) | 1800 RPM |
| Max. Power At Rated RPM (without fan) | 755 hp (563 kW) |
| Governor: Type | Electronic |
| Frequency Regulation: Steady State | ± 0.5% |
| Air Cleaner Type - All Models | Dry, Dual Element |

Amperage

| Voltage | Phase | Power Factor | Continuous Amperes | |
|--------------|-------|--------------|--------------------|-------|
| | | | Standby | Prime |
| 120/208 Volt | 3 | 0.8 | 1910 | 1848 |
| 277/480 Volt | 3 | 0.8 | 827 | 800 |

Engine Electrical System

| | |
|--|----------|
| Battery Charging Alternator Ground Type | Negative |
| Volts | 24 VDC |
| Ampere Rating | 70A |
| Starter Motor Rated Voltage | 24 VDC |
| Minimum Recommended Battery for 0 °C / Cold Cranking Performance | 1425 Ah |

Derating

| Derating Factors (60 Hz) | Altitude | Ambient Temperature |
|--|---------------------------------------|----------------------|
| The engine may be operated up to 3000 ft. (915 m) altitude without derating at 1800 rpm. | >3000 ft. = 1.8% per 1000 ft. (300 m) | +10% per 10°C (18°F) |



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Cooling System

| | |
|---------------------------|-------------------------------|
| Exhaust Manifold Type | Dry |
| Radiator Design | Standard horizontal discharge |
| Coolant Capacity - Engine | 6.3 gal. (24 L) |
| Water Pump Design/Type | Belt Driven, Centrifugal |
| Coolant Flow | 87 gal/min (329 L/min) |
| Heat Rejection to Coolant | 7830 BTU/min (138 kW) |
| Minimum Pressure Cap | 10 psi (70 kPa) |
| Thermostat Range | 180-200 °F (82-93 °C) |

Fuel System

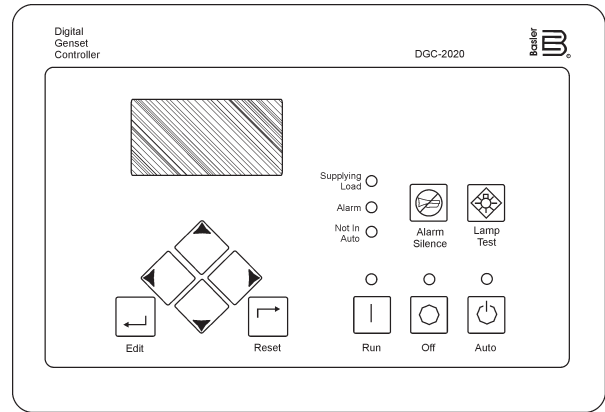
| | | |
|-------------------------------------|---------------------------|--------------|
| Recommended Fuel | ASTM-D975-No.1 or No. 2-D | |
| Fuel Pump Maximum Lift | 6.0 ft. (1.8 m) | |
| Filter Micron Size - 98% Efficiency | 2 | |
| Total Fuel Flow | 112 gal./hr. (424 L/Hr.) | |
| Fuel Tank Capacity | 800 gal (3028 L) | |
| Fuel Consumption - gal/hr (L/hr) | | |
| Diesel Fuel @ % of Load | Standby | Prime |
| 25% | 11.6 (43.9) | 9.9 (37.4) |
| 50% | 18.8 (71.1) | 17.2 (65.3) |
| 75% | 25.7 (97.2) | 23.9 (90.5) |
| 100% | 34.4 (130.2) | 31.1 (117.8) |

Lubrication System

| | |
|---------------------------------------|----------------------|
| Type | Full Pressure System |
| Oil Filters | Spin-on, Full Flow |
| Oil Pan Capacity | 22 gal. (83.0 L) |
| Oil Capacity with Filters | 24 gal. (91.0 L) |
| Oil Pressure at Rated Speed (minimum) | 20 psi (138 kPa) |

Exhaust System

| | |
|--|------------------------|
| Exhaust Temperature at Rated kW | 875 °F (468 °C) |
| Exhaust Flow at Rated kW | 3200 cfm (90.6 m³/min) |
| Silencer Type | Critical |
| Maximum Allowable Backpressure (standby) | 40.2 in/wc (10 kPa) |
| Exhaust Outlet Size at hook-up | 5.0 in. (127 mm) |



DGC-2020 Digital Genset Controller

Digital Controller Features

- Local and Remote Generator Control
- Automatic and manual starting and stopping
- Engine and Generator Protection
- Programmable Analog Engine Senders
- ECU Communications via SAE J1939
- 16 Programmable Contact Inputs
- Programmable Logic
- Automatic Transfer Switch Control (Mains Failure)
- Integrated RS485
- Auto Synchronizing
- Event recording

Monitoring

- Engine RPM
- Engine run time
- Generator voltage
- Generator current
- Generator frequency
- Oil pressure
- Battery voltage
- Fuel level measurements
- Running Hour Meter
- Coolant temperature
- Generator under/over voltage alarm/shutdown
- Generator under/over frequency alarm/shutdown
- Over Current alarm/shutdown
- Warm up and cooling functions
- Maintenance timer



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Optional Features and Accessories

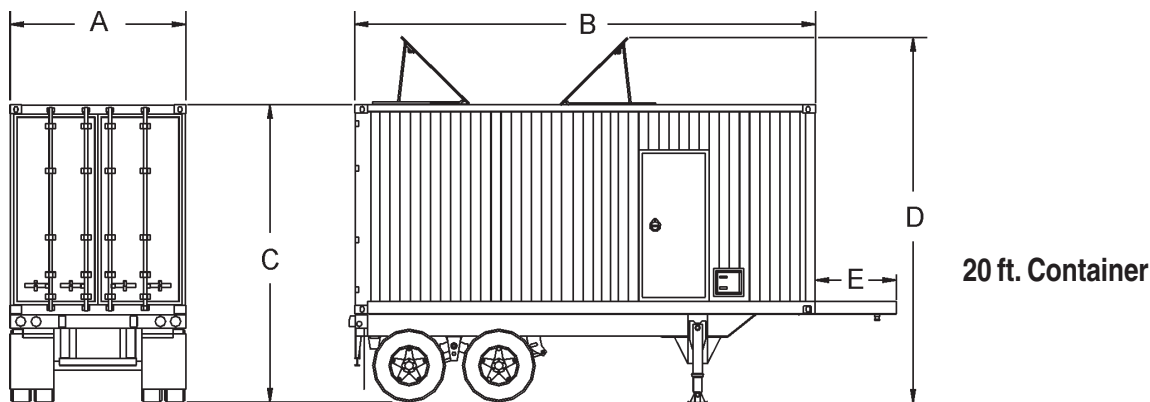
Generator Set

- Genset-to-Genset Paralleling Control System
- Base Load-to-Utility Paralleling Control System
- Custom Outlet Panels
- Rotary Voltage Selector Switch (High Wye/Low Wye Voltages)
- Auxiliary Oil Reservoir with Level Control (10-gallon)
- Centrifugal Oil Filter System
- Oil Pan Heater with Thermostat
- Alternator Strip Heater
- AC Battery Charger with Shore Power Receptacle

Container

- ISO Trailer Chassis (20 ft.)
- Double-wall Fuel Tank (900-gallon capacity)
- Fluid Containment
- Manual Fuel Valves (For Internal or External Fuel Supply)
- Fueling Platform (Aluminum Step Construction with Hand Rail)
- Personnel Ladder (Aluminum Construction)
- Interior Lights (AC Work lights)
- Custom Paint Colors (Artic White is Standard)
- Utility Grade Protective Relay

SPECIAL OPTIONS AVAILABLE UPON REQUEST



| Weight and Dimensions | | | | |
|------------------------------|-----------------------|------------------------|-----------------------|----------------------|
| A | B | C | D | E |
| 96 in. (2,438 mm) | 238 in. (6,045 mm) | 150 in. (3,810 mm) | 177 in. (4,495 mm) | 44 in. (1,117 mm) |
| Weight (Wet)* | | 20,440 lbs (9,271 kg) | | |
| Weight (Wet with trailer)* | | 26,920 lbs (12,211 kg) | | |

* Weight is approximate. Wet weight does not include fuel.

Backfeed 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. Specifications are subject to change without notice.

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