



500kW Containerized Diesel Generator Set

| Model | Emissions | Standby Rating | Prime Rating |
|----------|---------------|----------------|----------------|
| EGC500DD | EPA Certified | 60 Hertz | |
| | | 500kW (625kVA) | 450kW (562kVA) |



Standard Features

Detroit Diesel Heavy Duty Diesel Engine

- 4-cycle design, turbocharged, aftercooled, direct injection
- Polymide blade cooling fan
- Engine coolant heater
- Meets EPA emissions standards for mobile off-highway

Fuel System

- 800 gallon, single wall fuel tank
- Fuel priming system
- Fuel/water separators and drip pan
- External fuel fill
- Electric fuel pump
- 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

- Intelligen™ vibration-isolated controller
- Manual or remote engine start/stop
- RS232/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
- Critical grade silencer with heat blankets
- Crankcase filtration system

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 | Standby Rating: 125° C Prime Rating: 105° C |
| Bearing: Number, Type | Single, Sealed |
| Coupling | Flexible Disk |
| Amortisseur Windings | Full |
| Voltage Regulation (no load to full load) | 2% Maximum |
| One Step Load Acceptance % of rating per NFPA-110 | 100 |
| Peak Motor Starting HP | 250 |
| Generator Efficiency at Full Load | 93% |
| Phase Sequence | ABC (L1, L2, L3) |
| L-L Harmonic Max Total | 3.5% |
| L-L Harmonic Max Single | 2.5% |
| Voltage Dip Upon Full Load Application (1 Step) | 20% for 1.6 seconds |
| Voltage Rise Upon Full Load Rejection (1 Step) | 14% for 0.6 of a second |

The EGC500DD Sound Attenuated Generator is configured for standard 60 Hz, 208V and 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 with EMI protection.
- Skewed rotor for smooth voltage wave form.
- Vacuum impregnated epoxy varnish - Fungus resistant per MIL-I-24092.
- Sustain short circuit current at 300% of rated current up to 10 seconds.

Engine Specifications

| | |
|--|---|
| Manufacturer/Model | Detroit Diesel 8V2000-G81 |
| Engine Type | 4-cycle, Turbocharged, Air to Water Aftercooled |
| Cylinder Arrangement | V-8 |
| Displacement | 972 in ³ (16 liter) |
| Bore | 5.12 in. (130 mm) |
| Stroke | 5.91 in. (150 mm) |
| Compression Ratio | 14.5:1 |
| Piston Speed (60Hz) | 29.5 ft./sec. (9.0 m/sec) |
| Bearing Main: Number | 5 |
| Bearing Main: Type | Replaceable, Precision |
| Cylinder Block | Cast iron |
| Cylinder Head Material | Cast iron |
| Crankshaft Material | Forged steel |
| Valves | Dual, Poppet Type |
| Brake Mean Effective Pressure (BMEP) | 346 psi (2385 Kpa) |
| Rated RPM (60 Hz) | 1800 |
| Max. Power At Rated RPM (with fan) | 765 hp (570.5 kW) |
| Governor: Type | Electronic |
| Frequency Regulation: No load to full load | ±0.10 Hz |
| Frequency Regulation: Steady State | ±0.05 Hz |
| Air Cleaner Type - All Models | Dry, Dual Element |

Amperage

| Voltage | Phase | Power Factor | Continuous Amperes | |
|---------|-------|--------------|--------------------|-------|
| | | | Standby | Prime |
| 120/208 | 3 | 0.8 | 1734 | 1561 |
| 277/480 | 3 | 0.8 | 752 | 677 |

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 | 800 Ah |

Derating

| Derating Factors (60 Hz) | Altitude | Ambient Temperature |
|--|---------------------------|---------------------------|
| The engine may be operated up to 2000 ft. altitude and 40°C ambient temperature at the Standby rating, without derating. For operation at higher altitudes and ambient temperatures, the power should be derated according to the following factors: | >2000 m = 4% per 500 m | >40 °C = 1.5% per 5 °C |



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Cooling System

| | |
|--|-------------------------------|
| Exhaust Manifold Type | Dry |
| Radiator Design | Standard horizontal discharge |
| Coolant Capacity - Engine | 11.6 gal. (44 L) |
| Coolant Capacity - Engine and Radiator | 42 gal. (159 L) |
| Water Pump Design/Type | Belt Driven, Centrifugal |
| Coolant Flow | 79 gal/min (299 L) |
| Heat Rejection to Coolant | 11535 BTU/min (202.7 kW) |
| Fan Horsepower | 23 hp (17 kW) |
| Thermostat | 188.6 °F (87 °C) |

Fuel System

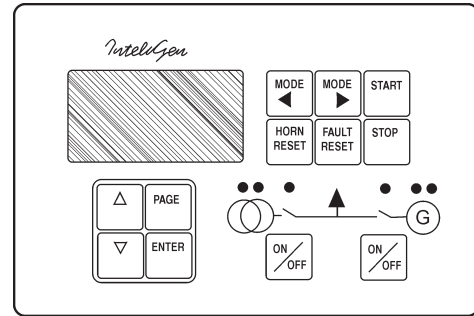
| | | |
|-------------------------------------|------------------------------|-------|
| Recommended Fuel | ASTM-D975-No.1 or No. 2-D | |
| Fuel Pump Maximum Lift | 6.0 ft. (1.8 m) | |
| Filter Micron Size - 98% Efficiency | 2 | |
| Total Fuel Flow | 186.1 gal./hr. (704.5 L/Hr.) | |
| Fuel Consumption | | |
| Diesel Fuel @ % of Load | gal/hr | L/hr |
| 25% | 10.1 | 38.2 |
| 50% | 18.1 | 68.5 |
| 75% | 26.8 | 101.4 |
| 100% | 37.7 | 142.7 |

Lubrication System

| | |
|-----------------------------|-----------------------------|
| Type | Full Pressure System |
| Oil Filters | 2 Spin-on, Full Flow |
| Oil Pan Capacity | 12.2 gal. (46.0 L) |
| Oil Capacity with Filters | 14.3 gal. (54.0 L) |
| Oil Pressure at Rated Speed | 47 - 57 psi (324 - 393 kPa) |

Exhaust System

| | |
|---|-------------------------|
| Exhaust Temperature at Rated kW (Dry Exhaust) | 980 °F (527 °C) |
| Exhaust Flow at Rated kW | 4080 cfm (115.5 m³/min) |
| Silencer Type | Critical |
| Maximum Allowable Backpressure | 41.1 in/wc (10.2 kPa) |
| Exhaust Outlet Size at hook-up | 5.0 in. (127 mm) |



Inteligen Digital Genset Controller

Digital Controller Features

- Large graphic back-lit LCD display 128x64 pixel resolution
- Automatic and manual starting and stopping
- Phase sequence supervision
- Automatic shutdown/alarm function
- Input frequency 50-60 Hz
- Parameters adjustable via PC or iG keyboard
- Predefined and user definable configurations available. One configuration includes set of inputs/outputs and parameters
- Adjustable parameters for each configuration
- 6 LED indicators
- Push buttons for simple control
- 4 programmable outputs (out of 20 functions selection)
- 4 binary configuration inputs
- Lamp test during start up
- Real time clock
- Sealed membrane panel to IP65
- 180 x 113 mm front panel mounted case
- Speed measurement from magnetic pickup
- Oil pressure, Coolant temperature, Battery voltage and Fuel level measurements
- Running Hour Meter
- All Generator metering, kVAr, kW, V1-V3, Hz, I1-I3, kWh, kVAh
- Generator under/over voltage alarm/shutdown
- Generator under/over frequency alarm/shutdown
- Over Current alarm/shutdown
- Warm up and cooling functions
- Pre-lubrication function with timers
- Adjustable crank attempts
- Data logging
- Remote communications (RS232/Modbus)



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Optional Features and Accessories

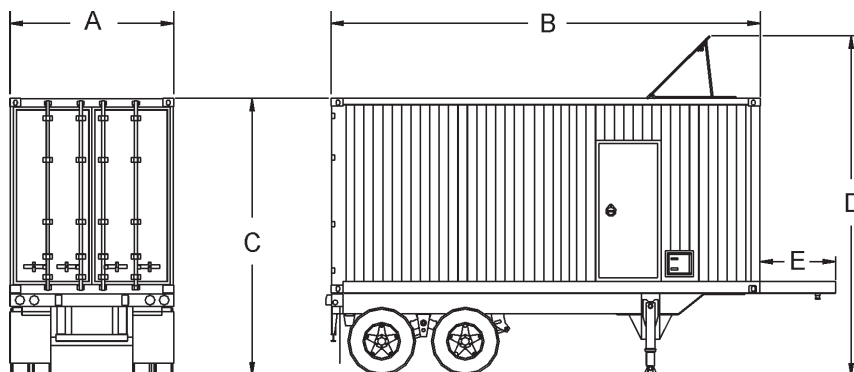
Generator Set

- 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 (15-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 (600-gallon capacity)
- Fluid Containment
- Manual Fuel Valves (For Internal or External Fuel Supply)
- Fueling Platform (Aluminum Step Construction with Hand Rail)
- Entrance Ladder (6-step, Aluminum Construction)
- Interior Lights (AC Work lights)
- Custom Paint Colors (Artic White is Standard)

SPECIAL OPTIONS AVAILABLE UPON REQUEST



20 ft. Container

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)* | | 22,500 lbs (10,206 kg) | | |
| Weight (Wet with trailer)* | | 29,980 lbs (13,599 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.

Your MQ Power dealer is:



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