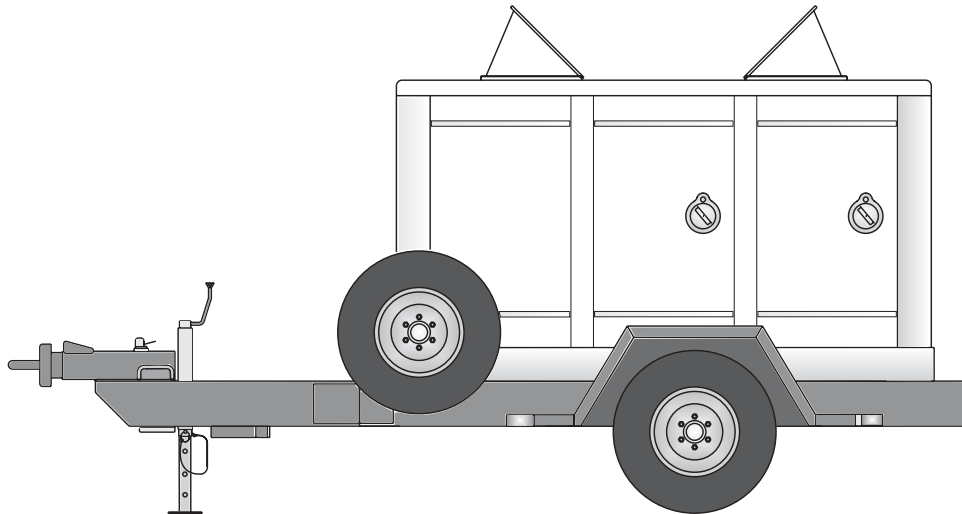




# 500 Amp Diesel Studio Generator

Model	Emissions	Amperage 120/208 Line to Neutral x 3
EGS500C3	Tier 3 EPA Certified	500 Amp
		60 Hertz



## Standard Features:

- Cummins Water-Cooled Diesel Engine
- Marathon Alternator
- Sound Aluminum Attenuated Housing with Rounded Corners
- Custom Radiator with Multi-Wing Fan
- Dual Automatic Voltage Regulators with Changeover Switch
- Led Instrument Panel - Voltage, Amperage, Hertz
- Analog Engine Gauges - Coolant Temperature, Oil Pressure, Hourmeter, Battery Volts
- 120/240 Single Phase - 60 kW  
120/208 Three Phase - 60 kW
- Outlet Panel:
  - 2 - Sets of color coded Camlok Receptacles
  - 2 - 15 Amp Edison Receptacles
  - 2 - 20 Amp Edison Receptacles
  - 2 - 50 Amp Twistlock Hubbell Connectors
  - 1 - 100 Amp Bates Connector
- Rotary Voltage Selector Switch - Two Position
- Main Line Circuit Breaker - 250 Amp
- Racor 500 Fuel/Water Filter
- Electric Priming Feature
- Crystal Sync Internal Electronic Engine Governor
- Internal DC Lighting with Timer
- Stainless Steel Water Lines, Exhaust Piping, Hinges and Outer Hardware
- Automatic Overhead Doors
- Inlet Rain Door with Automatic Intake Door Closure
- Critical Grade Exhaust Silencer with Rain Cap
- Oversized Alternator for Full Single Phase Output
- B20 Bio-diesel Compliant Engine
- Murphy Engine Diagnostic Monitoring System



# 500 Amp Diesel Studio Generator

## APPLICATION DATA

### Alternator Specifications

Manufacturer/Model	Marathon Magnaplus / 362PSL1604
Type	4-Pole, Rotating field
Exciter Type	Brushless, voltage regulated
Number of Leads	12
Insulation	NEMA MG1-1.66
Material	Class H
Generator RPM	1800
Power Factor	0.8
Coupling	Single bearing, flexible
Cooling Air Volume	700 CFM
Voltage Regulation (no load to full load)	±1%
Single Step Load Acceptance per NFPA 110	100% of rating

- Compliant with NEMA MG1-22, BS5000, CSA-C22-2, IEC-34-1 standards for temperature rise.
- Sustained short-circuit current up to 300% of rated current for up to 10 seconds.
- Drip-proof, self-venting, amortisseur windings.
- Epoxy impregnated windings with tropical insulation for increased environmental protection and long life.
- Exceptional waveshape and voltage balance; 2/3 pitch winding to minimize harmonic distortion.
- Solid-state, volts-per-hertz voltage regulator with ±1% no-load to full-load voltage regulation.

### Engine Specifications

Manufacturer/Model	Cummins / QSB5-G3
Model, Type	4-cycle, turbocharged, charge air cooled
Cylinder Arrangement	4 In-Line
Displacement	4.5 L (275 in <sup>3</sup> )
Bore	4.21 in. (107 mm)
Stroke	4.88 in. (124 mm)
Compression Ratio	17.3 : 1
Piston Speed	1464 ft/min (7.4 m/s)
Cylinder Block	Cast Iron
Cylinder Head	Cast Iron
Crankshaft	Nodular Iron
Brake Mean Effective Pressure (BMEP)	190 psi (1308 kPa)
Rated RPM	1800 RPM
Max. Power At Rated RPM (with fan)	126 hp (94 kWm)
Governor Type	Crystal Sync Electronic
Frequency Regulation: No load to full load	Isochronous under varying loads from no load to 100% rated load
Frequency Regulation: Steady State	±0.5% of mean value for constant loads from no load to full load
Air Cleaner Type	Dry, Single stage

### Amperage

Voltage	Phase	Amperage
120/240V	Single - zig zag	500A total
120/208V	Three - 4 wire	500A total

### Fuel System

Fuel Injection Pump Make	Bosch HPCR
Recommended Fuel	ASTM-D975/No. 2-D
Maximum Fuel Flow	35 gal/hr (133 l/hr)
Fuel Filters	Spin-on type
Trailer Fuel Tank Capacity	100 gal (378.5 L)
Fuel Consumption	
Diesel Fuel At % of Load	gal/hr (L/hr)
100%	6.9 (26)
75%	5.6 (21)
50%	3.9 (15)
25%	2.2 (8)

### Exhaust System

Exhaust Flow at Rated kW	727 cfm (20.7 m <sup>3</sup> /min)
Exhaust Temperature at Rated kW	828°F (445°C)
Maximum Allowable Backpressure	41 in H <sub>2</sub> O (10.2 kPa)

### Lubrication System

Type	Gear Driven
Oil Capacity-With Filter	12.8 qt. (12.1 L)
Oil Filter	Full flow, spin-on
Oil Cooler	Intragal, full flow
Oil Pressure At Rated Speed	40-60 psi (276-414 kPa)



# 500 Amp Diesel Studio Generator

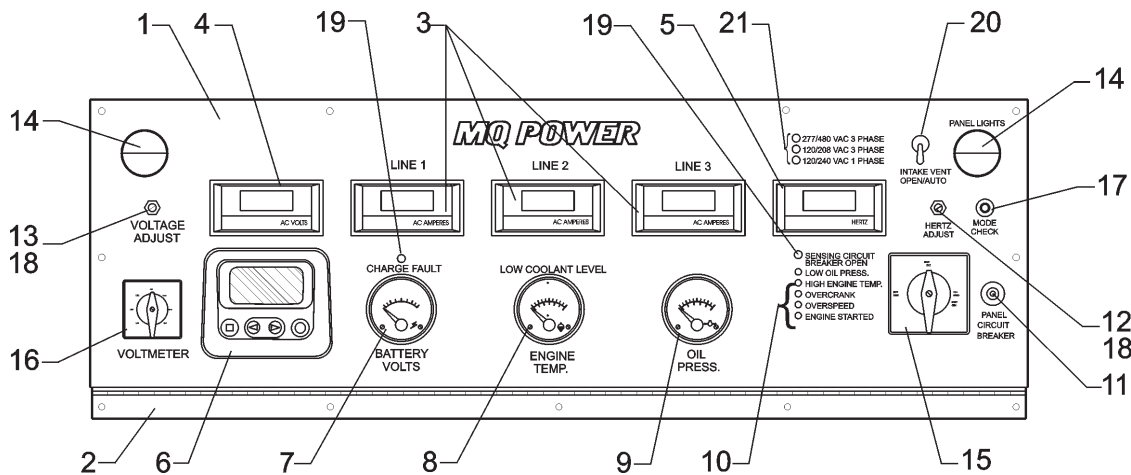
## Cooling System

Exhaust Manifold	Dry type
Radiator Design	Horizontal discharge
Ambient Temperature Rating	104°F (40°C)
Coolant Capacity (with radiator)	4.5 gal (17 L)
Coolant Flow	43 gal/min (163 L/min)
Radiator Cooling Air	6675 cfm (189 m³/min)
Heat Rejection To Charge Air Cooler	1320 Btu/min (25 kWm)
Heat Rejection To Coolant	2455 Btu/min (45 kWm)

## Engine Electrical System

Battery Charging Alternator Make	Cummins
Ground Type	Negative
Volts (DC)	12V
Ampere Rating	70 A
Starter Motor Make/Model	Cummins
Starter Motor Rated Voltage	12VDC
Starter Motor Battery Capacity	2 x 750 cca

## GENERATOR CONTROLLER



- |                                     |                                  |                                   |
|-------------------------------------|----------------------------------|-----------------------------------|
| 1. AC Digital Panel                 | 8. Water Temp. Gauge             | 15. Engine Control Switch         |
| 2. Hinge Panel                      | 9. Oil Pressure Gauge            | 16. Voltage Selector Switch       |
| 3. LCD Ammeter 1000A                | 10. Engine Control Unit          | 17. Panel Light/Mode Check Switch |
| 4. LCD Voltage Meter                | 11. Panel Circuit Breaker 10 Amp | 18. Locknut Pot Shift             |
| 5. LCD Frequency Meter              | 12. Speed Adjust Pot             | 19. LED 12V DC Red                |
| 6. Murphy Engine Diagnostic Display | 13. Voltage Adjust Pot           | 20. Intake Vent Door Switch       |
| 7. Voltmeter Gauge, 12 VDC          | 14. Panel Lights                 | 21. Voltage Indicator LED         |

### CONTROLLER FEATURES

- EMI/RFI Noise Immunity and Surge Performance per IEEE C62.41
- Certified to UL508 and CSA 22.2 #14 Industrial Control Equipment Standards
- 12 or 24 Volt DC compatible
- Individual Ammeters - L1, L2, L3
- Volt Adjusting Rheostat
- Optional kW Meter available

### ECU (Engine Control Unit)

Solid State 5-Light Engine Monitor  
Safety Shutdown and Fault Alarm for:

- Low Oil Pressure
- High Coolant Temperature
- Overspeed
- Overcrank

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.*



# 500 Amp Diesel Studio Generator

## Generator Set Optional Features:

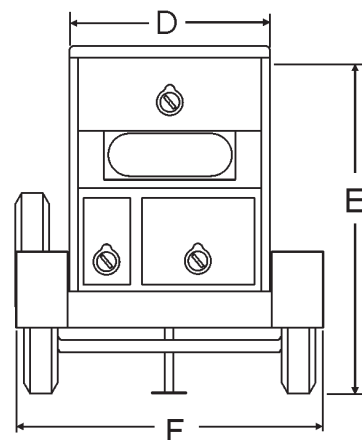
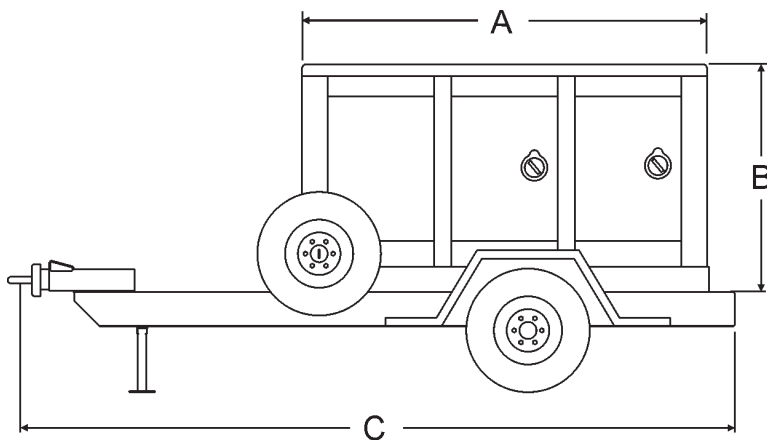
- 277/480 Volt Three Phase with Three Position Selector Switch
- Sub-Base Fuel Tank 100 or 200 gallons
- Stainless Steel Corners
- Exterior Lighting Package
- Analog Gauge Lighting
- 2 kVA Transformer
- Custom Paint Color
- Battery Charger
- Block Heater
- Isolation Transformer
- Forklift Pocket Base
- Catalytic Converter
- Bio-diesel Fuel System Upgrade
- 60 amp BATES connector
- Outlet Panel lighting (both Camlok & Convenience receptacle panels)
- Dual Racor 500 Filters
- Aluminized Glass Cloth over Insulation
- Fire Extinguisher Box Flush Mounted in Housing Door (fire extinguisher included)
- Distribution Boxes (Pin and Sleeve, Camlok Load Centers, Base Camp Packages etc.)
- Entertainment Cable

## Trailer Standard Features:

- Single Axle Trailer with 100 Gallon Fuel Tank
- Diamond Plate Decking
- 8-Lug Chrome Wheels (5) with Chrome Center Caps and Lug Nuts
- Goodyear Wrangler Tires with Mounted Spare
- Hydraulic Brakes
- Pintle Hitch
- Wheel Jack Stand (Mounted on Side of A-Frame)

## Trailer Optional Features:

- Electric Jack Stand
- Alcoa Aluminum Wheels
- Ground Rod Holder
- Tool Box
- Line-X on A-Frame and Fenders
- Wheel Chalk Basket
- Rear Stabilizing Jacks



## Weight and Dimensions

Generator Set Dimensions with Trailer					
A	B	C	D	E	F
100 in.	66 in.	167.6 in.	48 in.	77.5	72 in.
Appx. Net Weight - Generator			3500 lbs. (1588 kg)		
Appx. Net Weight - Trailer			1500 lbs. (680 kg)		
Trailer GVWR			6000 lbs. (2722 kg)		

Your MQ Power dealer is:



## MQ POWER

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