



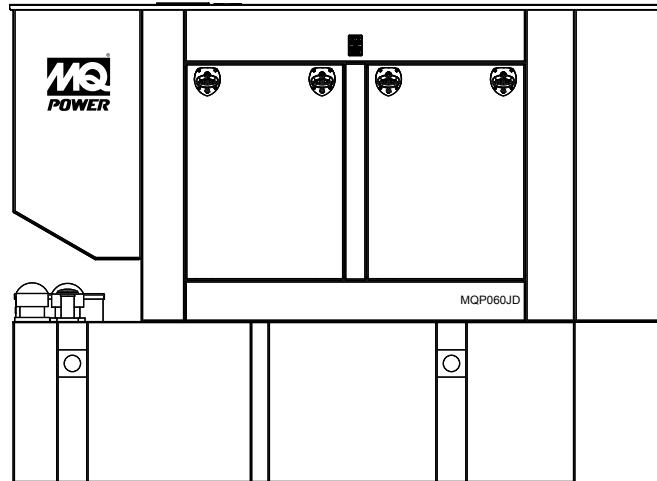
# MQP60JD

## MQ POWER 60kW Diesel On-Site Power Industrial Generator

**Prime Rating** — 60 kW (75 kVA)

**Standby Rating** — 54 kW (67.5 kVA)

Three-Phase, 60 Hertz, 0.8 PF



### STANDARD FEATURES

#### Heavy Duty Engine

- Heavy duty, 4-cycle, diesel engine; turbocharged, direct injection, water cooled, overhead valves.
- Single side service engine
- Meets EPA Tier 3 emissions standards.

#### Alternator

- Brushless, 4-pole, synchronous, 4 and 12 lead design.
- Class H insulation system conforms to NEMA MG1-22, BS5000,
- CSA-C22-2, IEC-34-1 standards for temperature rise.
- Sustained short-circuit capability allowing downstream coordination breakers to trip without collapsing the generator field.
- 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.

#### Electronic Voltage Regulator

- Encapsulated electronic voltage regulator precisely regulates the current into the exciter field.
- Voltage regulation of 1% no load to full load.

#### Full Load Acceptance

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

#### Cooling System

- Closed circuit, pressurized system with ambient temperature rating of 40°C (104°F).

#### Generator Control Panel

- Basler 2020™ microprocessor-based, digital controller; vibration isolated and NFPA 110 compliant.
- Backlit liquid crystal display screen with alphanumeric readout for display and programming.
- Self-diagnostic feature continuously verifies processing, memory circuits and input/output.

#### Skid and Housing

- Generator available as skid-mount or sub-base tank mount design.
- Integral vibration isolators.
- Outdoor weather-protective or sound-attenuated housings.
- Steel battery rack and battery cables.
- Aluminized steel exhaust muffler and stainless steel flex assembly.
- Flexible fuel lines.
- Oil and coolant drains.
- Engine serviced with lube oil and radiator coolant

#### Warranty

- Engine-generator sets are covered by an express written 2-year/ 2000 hour (whichever occurs first) limited warranty.
- Optional extended warranties available.

#### Agency Approval

- UL 2200



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### SPECIFICATIONS

Alternator Specifications	3-Phase (Standard)	Single-Phase (Optional)
Manufacturer/Model	Marathon Magnaplus 361CSL1602	Marathon Magnaplus 361CSL1613
Type	4-Pole, Rotating Field	4-Pole, Rotating Field
Exciter Type	Brushless, Shunt Excitation Design	Brushless, Shunt Excitation Design
Number of Leads	12 Lead, Broad Range, Reconnectable	4 Lead
Voltage Regulator	SE350, Solid State, Volts-per-Hertz	SE350, Solid State, Volts-per-Hertz
Insulation	NEMA MG1-1.66	NEMA MG1-1.66
Material	Class H	Class H
Temperature Rise	125°C, Standby Rating	125°C, Standby Rating
Bearing, Type	Single, Sealed	Single, Sealed
Coupling	Flexible Disk Type	Flexible Disk Type
Cooling Air Volume	250 cfm (7.1 m³/min.)	250 cfm (7.1 m³/min.)
Amortisseur Windings	Full	Full
Voltage Regulation (no load to full load)	±1%	±1%
Single Step Load Acceptance per NFPA 110	100% of Rating	100% of Rating

#### Engine Specifications

Manufacturer/Model	John Deere / 4045TF285
Emissions	Tier 3 Certified
Type	4-cycle, direct injection, turbocharged
Cylinder Arrangement	4 In-Line
Displacement	275 in³ (4.5 liter)
Bore	4.19 in. (106 mm)
Stroke	5.00 in. (127 mm)
Compression Ratio	19.0:1
Cylinder Block	Cast iron
Cylinder Head	Cast iron, overhead valves
Crankshaft	Ductile iron, heat treated micro finished journals
Brake Mean Effective Pressure (BMEP)	159 psi (1096 kPa)
Rated RPM	1800 RPM
SAE Gross Horsepower	99 hp
Governor Type	Electronic
Frequency Regulation:	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

#### Rating Guidelines

**STANDBY POWER:** Rating corresponds to ISO Standard Fuel Stop Power. It is applicable for supplying standby electrical power at variable load in areas with well established electrical networks in the event of normal utility power failure. No overload capability is available for this rating.

**PRIME POWER:** Rating corresponds to ISO Standard Power for continuous operation. It is applicable for supplying electrical power at variable load for an unlimited number of hours instead of commercially purchased power. A 10% overload capability is available for this rating.

**SINGLE PHASE OUTPUT:** Broad range alternators reconnected for single phase output (zig-zag) provide approximately 2/3 rated output, 3-phase kW at 1.0 P.F. Refer to Amperage chart. Optionally a dedicated single phase, 4-lead alternator is available

#### Exhaust System

Exhaust Flow at Rated kW	500 cfm (14.2 m³/min)
Exhaust Temperature at Rated kW	1155°F (552°C)
Maximum Allowable Backpressure	30.0 in/wc (7.5 kPa)
Heat Rejection To Exhaust	3814 Btu/min (67 kW)

#### Fuel System

Fuel Injection Pump Make	Denso HPCR
Recommended Fuel	ASTM-D975 / No.2-D
Feed Pump Pressure	5.8 psi (40 kPa)
Feed Pump Maximum Suction Head	11.6 feet (0.9 meters)
Fuel Filter	Spin-on, paper element type filter
Max. Fuel Flow	12.67 gal/hr (47.96 L/h)
Fuel Consumption	
Diesel Fuel At % of Load	gal/hr (L/hr)
100%	5.28 (19.99)
75%	4.15 (15.73)
50%	2.86 (10.82)
25%	1.65 (6.24)

#### Amperage

Voltage	Phase	Wire	Amperage
120/208 Volt	3	4	208
120/240 Volt	3	4	180
277/480 Volt	3	4	90
120/240 Volt	1	3	250

#### NOTICE

Generator is not intended for use in enclosed areas or where free flow of air is restricted.

Backfeed to a utility system can cause electrocution, shock 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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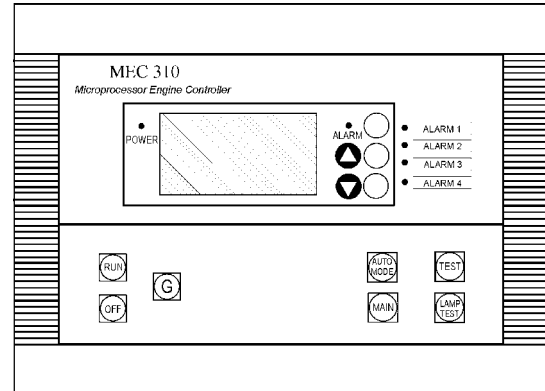
<b>Lubrication System</b>	
Type	Gear Driven
System Capacity-With Filter	3.88 gallons (14.7 liters)
Oil Filter	Full flow disposable spin-on
Oil Pressure At Rated Speed	46 psi (320 kPa)
Oil Temperature Normal Range	225-246°F (107-119°C)

<b>Cooling System</b>	
Exhaust Manifold Type	Dry
Radiator Design	Standard horizontal discharge
Ambient Temperature Rating	122°F (50°C)
Coolant Capacity (Engine Only)	2.25 gallons (8.5 liters)
Water Pump Design/Type	Belt driven, Centrifugal Vane
Coolant Flow	48 gal/min (180 L/min)
Radiator Cooling Air	6360 cfm (180 m³/min)
Heat Rejection From Engine	2749 Btu/min (49 kW)
Fan Diameter	22.0 in. (558.8 mm)
Fan Horsepower	1.84 hp (1.37 kW)
High Water Temperature Indication	230°F (110°C)
Pressure Cap Setting	15 psi (103 kPa)

<b>Engine Electrical System</b>	
Battery Charging Alternator - Make	Iskra
Ground Type	Negative
Volts (DC)	12VDC
Ampere Rating	75A
Starter Motor Make/Model	Denso
Starter Motor Rated Voltage	12 VDC
Cranking Current	800 A
Starter Rolling Current 920A@32°F (0°C)	
Starter Rolling Current 1300A@-22°F (-30°C)	

<b>Derating Factors</b>	<b>Altitude</b>	<b>Ambient Temperature</b>
The engine is rated at sea level and 77°F (25°C). For operation at higher altitudes and ambient temperatures, the power should be derated according to the following factors:	From 0 to 10,000 ft. 5% / 1000 ft.	Above 77°F (25°C) 0.5% / 10°F (-12°C)
	Above 10,000 ft. 4% / 1000 ft.	

### Digital Generator Controller



- MEC 310™ microprocessor-based digital generator controller.
- Meets all NFPA 110 requirements for emergency power systems Level I installations.
- High visibility graphical display screen with alpha-numeric readout.
- Self diagnostic features continuously verify processing, input/output and memory circuits.
- Digital 3-phase Power Metering including kW, kVAR, kVA, power factor, for generator supply.
- RS485 Remote communication port available with Modbus™.
- Certified to UL508 and CSA 22.2 #14 Industrial Control Equipment Standards.

### Standard Controller Features

- |   |   |
|---|---|
| <p><b>AC Metering Display:</b></p> <ul style="list-style-type: none"> <li>■ Voltage/Amperage/Frequency</li> <li>■ Generator Phase Voltage/Current</li> <li>■ Generator Frequency</li> </ul> <p><b>Engine Control and Monitoring:</b></p> <ul style="list-style-type: none"> <li>■ LCD Operator Interface Display</li> <li>■ Auto Start Control</li> </ul> <p><b>Engine Parameter Display:</b></p> <ul style="list-style-type: none"> <li>■ Switch Not In Auto</li> <li>■ Low Fuel Level</li> <li>■ Oil Pressure</li> <li>■ Engine Temperature</li> <li>■ Battery Voltage/Condition</li> <li>■ RPM</li> <li>■ Fuel Level</li> </ul> <p><b>Digital Fault Alarm/Shutdown Display:</b></p> <ul style="list-style-type: none"> <li>■ Overvoltage</li> <li>■ Emergency Stop</li> <li>■ Loss Of Speed</li> <li>■ Overcrank</li> <li>■ Overspeed Alarm</li> <li>■ Low Oil Pressure Alarm</li> <li>■ High Engine Temperature</li> <li>■ Low Coolant Level</li> </ul> <p><b>Dedicated Output Contacts:</b></p> <ul style="list-style-type: none"> <li>■ 5 Programmable Outputs</li> </ul> | <p><b>Configurable Set Points/Time Delays:</b></p> <ul style="list-style-type: none"> <li>■ Engine Start</li> <li>■ Crank</li> <li>■ Rest</li> <li>■ Cool down</li> <li>■ Oil bypass</li> </ul> <p><b>Standard 30 Event Log:</b></p> <ul style="list-style-type: none"> <li>■ Time/Date Stamp Capability</li> <li>■ Real Time Clock</li> <li>■ Battery Backup</li> </ul> <p><b>Protective Relaying:</b></p> <ul style="list-style-type: none"> <li>■ IEEE/ANSI (27/59) under/over voltage</li> <li>■ (81 o/u) under/over frequency</li> <li>■ (32) Reverse Power</li> <li>■ (51) Time-overcurrent Protection</li> </ul> <p><b>Communication Interface Ports:</b></p> <ul style="list-style-type: none"> <li>■ RJ11 port for PC interface</li> </ul> <p><b>Optional Features:</b></p> <ul style="list-style-type: none"> <li>■ J1939 CANbus engine communications port</li> <li>■ MODBUS™ - RS485 Communication port</li> <li>■ Automatic Mains Failure control</li> <li>■ Expansion Alarm Remote Annunciator</li> <li>■ Service Setup Port (SSP 300)</li> </ul> |
|---|---|



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### Generator Set Standard Options

#### Alternator

- Full Output 3-Phase Alternator
- Permanent Magnet Generator (PMG)

#### Control Panel

- Remote Monitoring and Generator Network Communications Link

#### Cooling System

- Coolant Heater

#### Enclosed Unit

- Acoustic Sound-Attenuated Housing
- Critical Grade Exhaust Silencer

#### Electrical System

- Optima "RED TOP" battery
- Battery Thermal Wrap
- Battery Tender® Charger, Float Type, 5 Amperes @ 12VDC

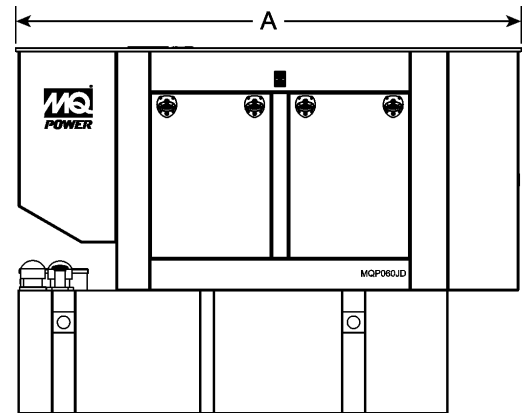
#### Fuel System

- Sub-base Fuel Tanks, Double Wall, UL142  
24-hr/125 gal (473 liters), 36-hr/198 gal (750 liters),  
48-hr/250 gal (946 liters), 72-hr/375 gal (1,420 liters)

#### Miscellaneous

##### Main Line Circuit Breaker

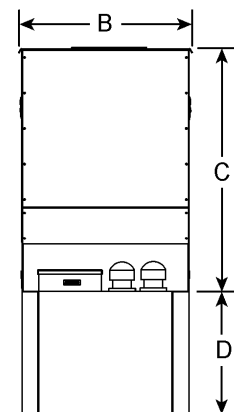
- 120/208 Volt, Three Phase
- 120/240 Volt, Single Phase



Weights and Dimensions				
Housing Options	A	B	C	D
				Fuel Tank Height vs. Capacity*
Sound Attenuated	120 in. (3,048 mm)	40 in. (1,016 mm)	58.13 in. (1,476 mm)	24-hr./125 gal (473 liters) 17.0 in. (432 mm)
				36-hr./198 gal (750 liters) 23.0 in. (584 mm)
				48-hr./250 gal (946 liters) 29.5 in. (737 mm)
				72-hr./375 gal (1,420 liters) 41.0 in. (1,041 mm)
				Weight

\*Optional

1. Weight represents unit configuration including 72-hr/375 gal (1,420 liters) fuel tank.



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