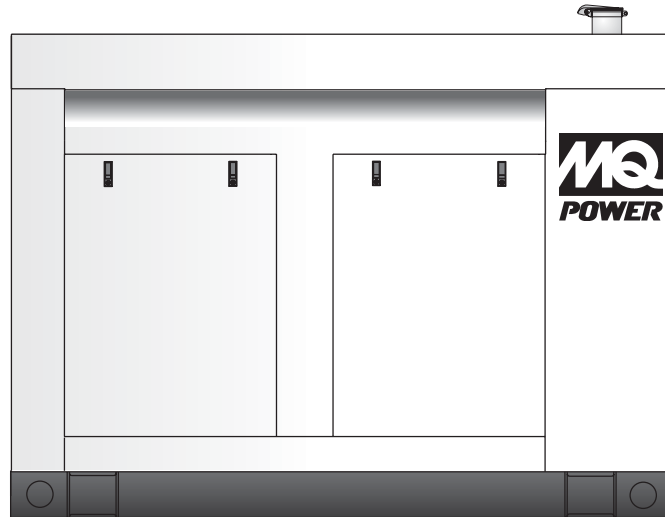




60kW Natural Gas On-Site Power Industrial Generator

Model	Standby Rating	
MQP60GM	60 Hz	60 kW (75 kVA)
	1800 RPM	



Standard Features

Heavy Duty Engine

- Natural gas or liquid propane, naturally aspirated, 4-cycle, water-cooled.
- Electronic speed control governor.

Alternator

- Brushless, 4-pole, synchronous, 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 $\pm 1.0\%$ 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 50°C (122°F).

Generator Control Panel

- MEC 310™ microprocessor-based, digital control panel; vibration isolated and NFPA 110 compliant.
- Liquid crystal display screen with alpha-numeric readout for display and programming.
- Self-diagnostic feature continuously verifies processing, memory circuits and input/output.

Skid and Housing

- Generator available as open skid-mount or outdoor housing design.
- Optional weather-protective or sound-attenuated housings.
- Integral vibration isolators.
- Steel battery rack and battery cables.

Warranty

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

Agency Approval

- UL 2200 certification.



60kW Natural Gas On-Site Power Industrial Generator

Alternator Specifications	Standard 3 Phase Generator	Optional Full Output 1-Phase Generator
Manufacturer/Model	Marathon MagnaPlus 361PSL1602	Marathon MagnaPlus 287PSL1713
Type	4-Pole	4-pole
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	Single
Coupling	Flexible Disk Type	Flexible Disk Type
Cooling Air Volume	700 cfm	250 cfm
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	General Motors/Vortec™ 5700
Type	4-cycle, naturally aspirated
Cylinder Arrangement	V8
Displacement	350 in ³ (5.7 L)
Bore	4.0 in. (101.6 mm)
Stroke	3.48 in. (88.4 mm)
Compression Ratio	9.1 : 1
Cylinder Block	Cast Iron
Cylinder Head	Cast Iron
Crankshaft	Nodular Iron
Brake Mean Effective Pressure (BMEP)	140.4 psi (968 kPa)
Rated RPM	1800 RPM
Max. Power @ Rated RPM	Standby: 95 hp (70.8 kW)
Governor Type	Electronic
Frequency Regulation: no load to full load	8% 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.

SINGLE PHASE OUTPUT: Broad range alternators can supply single phase output up to 2/3 set rated 3-phase kW at 1.0 P.F. Refer to Amperage chart.

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 Full Output	1	3	250

Lubrication System

Type	Gear Driven
Oil Capacity-With Filter	1.6 gal (6.2 L)
Oil Filter	Full Flow, bypass if plugged
Oil Pressure At Rated Speed	40-45 psi
Maximum Oil Temperature	260°F (127°C)

Engine Electrical System

Battery Charging Alternator - Make	Remy
Ground Type	Negative
Volts (DC)	12 VDC
Ampere Rating	70 A
Starter Motor Make/Model	GM/Delco
Starter Motor Rated Voltage	12 VDC
Starter Motor Battery Capacity	450 A



60kW Natural Gas On-Site Power Industrial Generator

Cooling System

Exhaust Manifold Type	Dry
Radiator Design	Standard horizontal discharge
Ambient Temperature Rating	122°F (50°C)
Coolant Capacity	4.5 gal (20.5 L)
Water Pump Design/Type	Belt driven, Centrifugal Vane
Coolant Flow	34 gal/min (143 L)
Radiator Cooling Air	161 m ³ /min (5700 cfm)
Heat Rejection From Engine	1760 Btu/min (30.9 kW)
Heat Rejection To Coolant	3120 Btu/min (54.8 kW)
Fan Diameter	19 in. (482 mm)
Fan Horsepower	6.0 hp (4.5 kW)
High Water Temperature Indication	230°F (110°C)

Fuel System

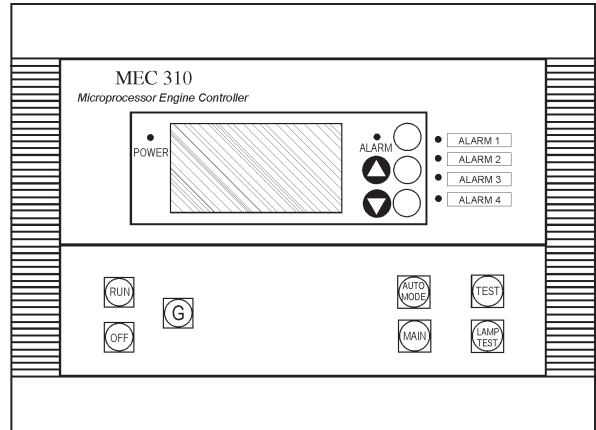
Fuel Type	Pipeline Natural Gas	Liquid Propane
Fuel Supply Line Inlet	3/4" pipe, 1" hose	1/4" NPT 3/8" hose
Fuel Supply Pressure	4-6 in/H ² O	250 psi
Fuel Consumption at % Rated Load		
100%	817 cf/hr	8.82 g/hr
75%	612 cf/hr	6.60 g/hr
50%	408 cf/hr	4.40 g/hr
25%	204 cf/hr	2.20 g/hr

Exhaust System

Exhaust Flow at Rated kW	479 cfm (13.5 m ³ /min)
Exhaust Temperature at Rated kW	1300°F (704°C)
Maximum Allowable Backpressure	50 in/H ² O (12.5 kPa)
Heat Rejection To Exhaust	5669.5 Btu/min (99.6 kW)

Derating Factors

	Altitude
The engine may be operated up to 1000 ft. without derating. For operation at higher altitudes the power should be derated according to the following factors:	3.3% per 1000 ft.



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, kWhr and kVARhr 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

AC Metering Display:

- Voltage/Amperage/Frequency
- Generator Phase Voltage/Current
- Generator Frequency

Engine Control & Monitoring:

- LCD Operator Interface Display
- Auto Start Control

Engine Parameter Display:

- Switch Not In Auto
- Low Fuel Level
- Oil Pressure
- Engine Temperature
- Battery Voltage/Condition
- RPM
- Fuel Level

Digital Fault Alarm/Shutdown Display:

- Overvoltage
- Emergency Stop
- Loss Of Speed
- Overcrank
- Overspeed Alarm
- Low Oil Pressure Alarm
- High Engine Temperature
- Low Coolant Level

Dedicated Output Contacts:

- 8A
- Normally Open Crank
- Fuel (Run)

Configurable Set Points/Time Delays:

- Engine Start
- Crank
- Rest
- Cool down
- Oil bypass

Standard 30 Event Log:

- Time/Date Stamp Capability
- Real Time Clock
- Battery Backup

Protective Relaying:

- IEEE/ANSI (27/59) Over/under voltage
- (81 o/u) Overunder frequency
- Reverse Power
- (51) Time-overcurrent Protection

Communication Interface Ports:

- CANbus communication port
- RJ11 port for PC interface

Optional Features

- J1939 CANbus engine communications port
- MODBUS™ - RS485 Remote Communication port
- Automatic Mains Failure control
- Expansion Alarm Remote Annunciator (EAP 300)
- Service Setup Port (SSP 300)



60kW Natural Gas On-Site Power Industrial Generator

Generator Set Options

Alternator

- Full output 1 Phase Alternator
- Generator Strip Heater
- Permanent Magnet Generator (PMG)

Control Panel

- Remote Monitoring and Generator Network Communications Link
- Voltage Adjusting Rheostat

Cooling System

- Coolant Heater
- Radiator Duct Flange

Engine

- Engine Crankcase Ventilation Filter

Enclosed Unit

- Outdoor Weather-protective Housing
- Outdoor Sound-Attenuated Housing
- Critical Grade Exhaust Silencer
- Exhaust Mounting Package
- Rain Cap

Open Unit

- Critical Exhaust Silencer
- Exhaust Mounting Package

Electrical System

- Battery
- Environmental Plastic Battery Box
- Battery Charger, Equalize/Float Type 3.5 Amperes
- Battery Charger w/Alarms, Equalize/Float Type, 10 Amperes

Fuel System

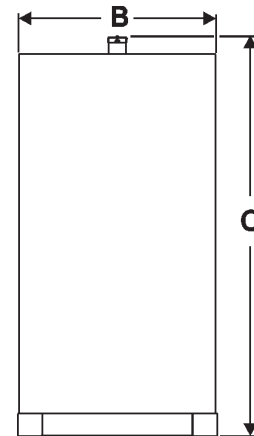
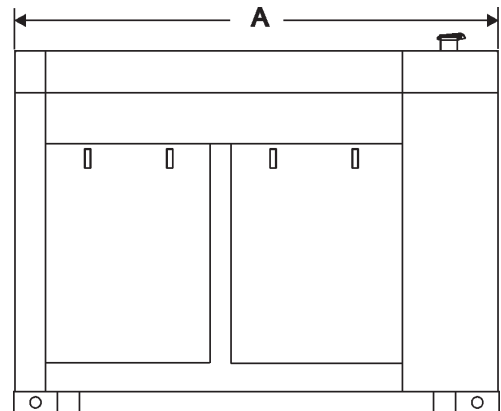
- LPG - Liquid Withdrawal
- LPG - Vapor Withdrawal

Automatic Transfer Switch

- Amperage _____
- No. Poles _____
- Type Enclosure _____
- Options _____

Miscellaneous

- Main Line Circuit Breaker
 - 120/208 Volt, 3 Phase, 3 Pole
 - 120/240 Volt, 3 Phase, Delta, 3 Pole
 - 139/240 Volt, 3 Phase, 3 Pole
 - 277/480 Volt, 3 Phase, 3 Pole
 - 120/240 Volt, 1 Phase, 2 Pole
- Main Line Circuit Breaker Options
 - Auxiliary Contacts
 - DC Shunt Trip
- Remote Annunciator Panel
- Remote Emergency Stop Kit
- Vibration Isolators, Spring Type



Weights and Dimensions

Housing Options	A	B	C
Open	100.5 in. (2,552 mm)	34 in. (863 mm)	50 in. (1,270 mm)
Weight	1,480 lbs (671 kg)		
Standard	100.5 in. (2,133 mm)	34 in. (863 mm)	67 in. (1,701 mm)
Weight	2,027 lbs (919 kg)		
Sound Attenuated	100.5 in. (2,133 mm)	34 in. (863 mm)	67 in. (1,701 mm)
Weight	2,089 lbs (948 kg)		

Weights are based on dry gensets with standard equipment. The total weight may vary according to fluid additions and/or optional equipment ordered with the unit.

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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