

MQT100

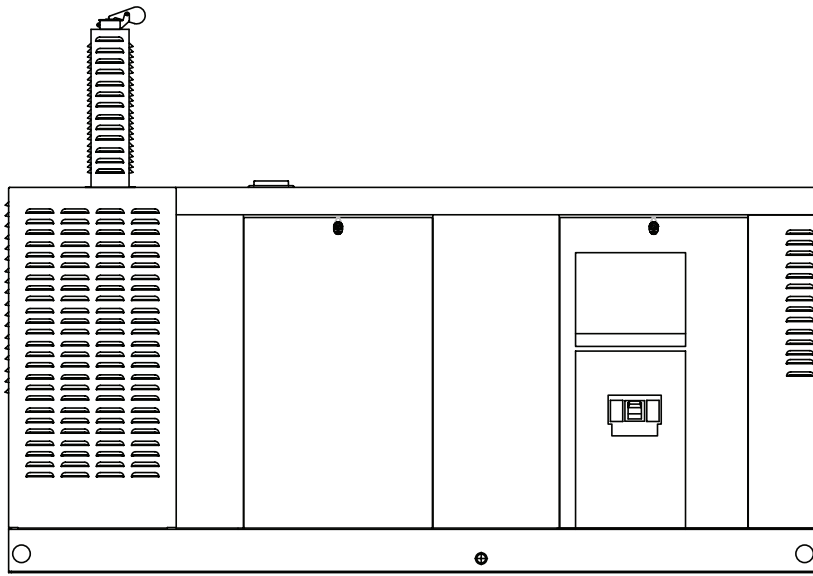
Generac Modular Power System (MPS)

Standby Power Rating
100KW 60 Hz

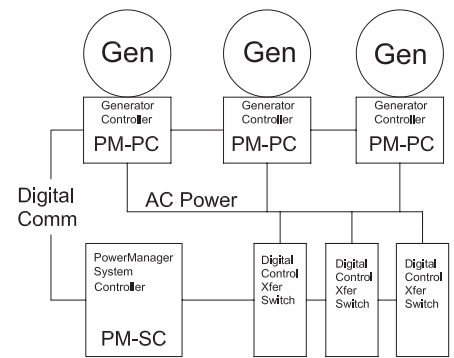
Power Matched

GENERAC 6.8L ENGINE

Gas Engine Generator
Meets EPA Emission Regulations



PowerManager® Digital Control Platform



FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.
- **PARALLELING SYSTEM FEATURES:**
 - ✓ AUTO SYNCHRONIZATION
 - ✓ ISOCHRONOUS LOAD SHARING
 - ✓ REVERSE POWER PROTECTION
 - ✓ MAXIMUM POWER PROTECTION
 - ✓ ELECTRICALLY OPERATED MECHANICALLY HELD TRANSFER SYSTEM
 - ✓ REDUNDANT OPERATION AND INCREASED RELIABILITY
 - ✓ UL2200 LISTED
 - ✓ PARALLELS WITH MQT100, MG150 AND MG200
- **POWERMANAGER DIGITAL CONTROL PLATFORM™.** The PowerManager Digital Control Platform (PM-DCP) is a powerful control system built around a 32-bit, industrial microprocessor.

Standard factory programming controls the entire engine/generator system, while allowing the PM-DCP, with its onboard PLC, to be customized to meet any application requirement. The system is available on single unit gas, diesel or bi-fuel installations as well as Modular Power Systems (MPS) from 350 kW - 3000 kW.

- **SINGLE SOURCE SERVICE RESPONSE** from Generac's dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component. You are never on your own when you own a GENERAC POWER SYSTEM.
- **ECONOMICAL NATURAL GAS POWER.** Low cost operation due to modern gas engine technology. Better fuel utilization plus lower cost per kW provide real savings.
- **LONGER ENGINE LIFE.** Generac heavy-duty natural gas engines provide long and reliable operating life.
- **GENERAC TRANSFER SWITCHES, POWERMANAGER™ AND ACCESSORIES.** Long life and reliability is synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems, accessories, and PowerManager™ controls for total system compatibility.

GENERAC®

APPLICATION & ENGINEERING DATA

MQT100

GENERATOR SPECIFICATIONS

| | |
|---|--------------------------------|
| TYPE | Four-pole, revolving field |
| ROTOR INSULATION | Class H |
| STATOR INSULATION | Class H |
| TOTAL HARMONIC DISTORTION | <3.5% |
| TELEPHONE INTERFERENCE FACTOR (TIF) | <50 |
| SHORT CIRCUIT CURRENT | 300% |
| ALTERNATOR | Self-ventilated and drip-proof |
| BEARINGS (PRE-LUBED & SEALED) | 1 |
| COUPLING | Quiet Drive |
| LOAD CAPACITY (STANDBY) | 100% |
| ALTERNATOR TEMP RISE | 120°C |

NOTE: Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046 and DIN6271 standards.

| | |
|-------------------------|-----------------------|
| EXCITATION SYSTEM | Brushless ✓ |
| REGULATION | Digital Solid-state ✓ |
| | ± .25% regulation ✓ |
| SENSING | 3 Phase ✓ |

CONTROL SYSTEM PM-PC (See Note 5)

The Generac PowerManager™ Paralleling control is mounted at the generator set and monitors all engine and alternator parameters:

- High/Low Battery
- High Oil Temp
- Low Oil Pressure
- Low Coolant Level
- Overspeed/Underspeed
- Sensor Failures
- Over/Under Voltage
- Sensor Failures
- High/Low Frequency
- Pre-alarm Hi Oil Temp
- Pre-alarm Lo Oil Pressure
- Overcrank
- Pre-alarm Hi Coolant
- Critical Low Fuel
- Lo Fuel Pressure

The instrumentation screen displays the following:

- AC volts
- Frequency
- Power Factor
- Coolant level
- Fuel level(%)
- Oil Pressure
- AC amps
- kW
- Coolant Temp
- Run time hours
- Battery Voltage
- Engine Speed

■ Serial Communication to the PowerManager Integrated Controller or System Controller via RS485 connection

■ Programmable

■ Built in Synchronizer for paralleling control and protection

■ Digital Voltage Regulator for concise control

■ Three Pole 400amp paralleling switch

- Rated 600 volts
- UL Recognized device
- Electrically Operated - Mechanically held
- Built in arc suppression

■ Mainline Circuit Breaker

Mounted in series with paralleling switch

■ Generator Connection Box

Mounted on right side (facing rear) 12" x 22" x 36"

Access from side, top, bottom to paralleling switch

ENGINE SPECIFICATIONS

| | |
|-------------------------|---------------------|
| MAKE | Generac |
| MODEL | V Type |
| CYLINDERS | 10 |
| DISPLACEMENT | 6.8 Liter |
| BORE | 3.55 |
| STROKE | 4.17 |
| COMPRESSION RATIO | 9:1 |
| INTAKE AIR SYSTEM | Naturally Aspirated |
| VALVE SEATS | Hardened |
| LIFTER TYPE | Hydraulic |

GOVERNOR SPECIFICATIONS

| | |
|-------------------------------|-------------|
| TYPE | Electronic |
| FREQUENCY REGULATION | Isochronous |
| STEADY STATE REGULATION | ± 0.25% |
| ADJUSTMENTS | |
| Speed | Yes |
| Droop | Yes |

ENGINE LUBRICATION SYSTEM

| | |
|--------------------------|---------------------|
| OIL PUMP | Gear |
| OIL FILTER | Full flow cartridge |
| CRANKCASE CAPACITY | 5 Quarts |

ENGINE COOLING SYSTEM

| | |
|--------------------|-------------|
| TYPE | Closed |
| WATER PUMP | Belt driven |
| FAN SPEED | 1850 |
| FAN DIAMETER | 26 inches |
| FAN MODE | Puller |

FUEL SYSTEM

| | |
|--------------------------------|----------------------------|
| FUEL TYPE | Natural gas, propane vapor |
| CARBURETOR | Down Draft |
| SECONDARY FUEL REGULATOR | Standard |
| FUEL SHUT OFF SOLENOID | Standard |
| OPERATING FUEL PRESSURE | 11" - 14" H ₂ O |

ELECTRICAL SYSTEM

| | |
|---------------------------------|------------|
| BATTERY CHARGE ALTERNATOR | 12V 30 Amp |
| STATIC BATTERY CHARGER | 12V 10 Amp |
| RECOMMENDED BATTERY | 24F 625CCA |
| SYSTEM VOLTAGE | 12 Volts |

MQT100

| OPERATING DATA | STANDBY | | |
|---|-------------------------------------|------------------|----------|
| | MQT100 | | |
| GENERATOR OUTPUT VOLTAGE/KW-60Hz 120/208V, 3-phase, 0.8 pf 120/240V, 3-phase, 0.8 pf 277/480V, 3-phase, 0.8 pf 600V, 3-phase, 0.8 pf | N.G. | Rated AMP | |
| NOTE: Consult your Generac dealer for additional voltages. | 100 | 347 | |
| | 100 | 301 | |
| | 100 | 150 | |
| | 100 | 120 | |
| MOTOR STARTING KVA Maximum at 35% instantaneous voltage dip with standard alternator — 60 Hz | 208/240V | 480V | |
| | 206 kVA | 275 kVA | |
| ENGINE FUEL CONSUMPTION | Natural Gas | Propane | |
| | (ft ³ /hr.) | (gal/hr.) | cu ft/hr |
| Exercise cycle | 130 | 1.42 | 52.3 |
| 25% of rated load | 371 | 4.06 | 149.4 |
| 50% of rated load | 713 | 7.81 | 287.4 |
| 75% of rated load | 994 | 10.88 | 400.4 |
| 100% of rated load* | 1260 | 13.80 | 507.8 |
| COOLING | | | |
| Coolant capacity | System - US gal. | 4.5 | |
| Coolant flow/min. | 60 Hz - US gal. | 45 | |
| Heat rejection to coolant | | 342,000 | |
| Inlet air | 60 Hz - cfm | 6,500 | |
| Max. operating air temperature on radiator | °F | 140 | |
| Max. operating ambient temperature | °F | 122 | |
| Max. external pressure drop on radiator | " H ₂ O | 0.5 | |
| COMBUSTION AIR REQUIREMENTS | | | |
| Flow at rated power | 60 Hz - cfm | 262 | |
| EXHAUST | | | |
| Exhaust flow at rated output | 60 Hz - cfm | 888 | |
| Max recommended back pressure | Hg | 1.5" | |
| Exhaust temp at rated output | °F | 960 | |
| ENGINE | | | |
| Rated RPM | 60 Hz | 2300 | |
| HP at rated KW** | 60 Hz | 168 | |
| Piston speed | 60 Hz - ft./min. | 1583 | |
| BMEP | 60 Hz – psi | 139 | |
| DERATION FACTORS | | | |
| Temperature | | | |
| | 1.65% for every 10°F above - °F | 110 | |
| Altitude | | | |
| | 3.0% for every 1000 ft. above - ft. | 600 | |

* Refer to "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes.

** Refer to "Emissions Data Sheets" for maximum bHP for EPA and SCAQMD permitting purposes.

Notes:

1. Motor Starting kVA adds directly for each generator on the bus. With Generac's PowerManager® Control System, the load is shared proportionally.
2. Maximum distance between Generator Sets is determined by the voltage drop of the power conductors and the maximum distance allowed for the RS485 connection. If the Distance between units exceeds **500** feet, consult factory for wire and communication recommendations.
3. Fuel consumption like motor starting kVA is additive. Each Generator will proportionally share the load and the fuel consumption will be based on the percentage of load shared.
4. A complete MPS system requires a PowerManager Paralleling Controller (PM-PC), a PowerManager System Controller (PM-SC), and switch(es) from Generac Power System's GTS line of digitally controlled transfer switches. In addition, Generac Power Systems' Genlink® Communications Software provides remote monitoring and user interface with the Power Manager Digital Control Platform.
5. Values given are maximum temperatures to which power adjustment factors can be applied. Consult your Generac representative if operating conditions exceed these maximums.
6. MPS Gensets are available for Standby Applications Only, at this time.
7. Consult factory for propane (LPG) fuels.

