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

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	
ALTERNATOR	Self-ventilated and drip-proof
BEARINGS (PRE-LUBED & SEALED)	1
COUPLING	Quiet Drive
LOAD CAPACITY (STANDBY)	
ALTERNATOR TEMP RISE	

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 🗸

ENGINE SPECIFICATIONS

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

GOVERNOR SPECIFICATIONS

TYPE		Electronic
FREQUENC	Y REGULATION	Isochronous
STEADY ST	ATE REGULATION	± 0.25%
ADJUSTME	NTS	
	Speed	Yes
	Droop	Yes

ENGINE LUBRICATION SYSTEM

OIL PUMP	Gea
OIL FILTER	
CRANKCASE CAPACITY	

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 Batte
- High Oil Temp
- Low Oil Pressur · Low Coolant Level
- Overspeed/Underspeed •
- Sensor Failures
- Over/Under Voltage •
- Sensor Failures
- The instrumentation screen displays the following:
 - AC volts AC amps
 - Frequency

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- Power Factor
- kW Coolant Temp Run time hours
- Coolant level Fuel level(%)
- **Battery Voltage**
 - Engine Speed
- Oil Pressure 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 supression
- 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 COOLING SYSTEM

TYPE	Closed
WATER PUMP	Belt driven
FAN SPEED	
FAN DIAMETER	
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	
STATIC BATTERY CHARGER	
RECOMMENDED BATTERY	
SYSTEM VOLTAGE	

Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

ry	 High/Low Frequency
	 Pre-alarm Hi Oil Temp
re	 Pre-alarm Lo Oil Pressure

- Overcrank
- Pre-alarm Hi Coolant · Critical Low Fuel
- Lo Fuel Pressure

GENERAC[®]

MQT100

OPERATING DATA	STANDBY	
GENERATOR OUTPUT VOLTAGE/KW-60Hz120/208V, 3-phase, 0.8 pfNOTE: Consult your120/240V, 3-phase, 0.8 pfGenerac dealer for additional voltages.277/480V, 3-phase, 0.8 pfotherwise	N.G. 100 100 100 100 100	AQT100 Rated AMP 347 301 150 120
MOTOR STARTING KVA Maximum at 35% instantaneous voltage dip with standard alternator — 60 Hz	<u>208/240V</u> 206 kVA	480V 275 kVA
ENGINE FUEL CONSUMPTION Exercise cycle 25% of rated load 50% of rated load 75% of rated load 100% of rated load*	Natural Gas (ft ³ /hr.) 130 371 713 994 1260	Propane(gal/hr.)cu ft/hr1.4252.34.06149.47.81287.410.88400.413.80507.8
COOLING Coolant capacity System - US gal. Coolant flow/min. 60 Hz - US gal. Heat rejection to coolant Inlet air Inlet air 60 Hz - cfm Max. operating air temperature on radiator °F Max. operating ambient temperature °F Max. external pressure drop on radiator "H ₂ O	4.5 45 342,000 6,500 140 122 0.5	
COMBUSTION AIR REQUIREMENTS Flow at rated power 60 Hz - cfm		262
EXHAUST60 Hz - cfmExhaust flow at rated output60 Hz - cfmMax recommended back pressureHgExhaust temp at rated output°F		888 1.5" 960
ENGINERated RPM60 HzHP at rated KW**60 HzPiston speed60 Hz - ft./min.BMEP60 Hz - psi		2300 168 1583 139
DERATION FACTORS Temperature 1.65% for every 10°F above - °F Altitude 3.0% for every 1000 ft. above - ft.		110 600

* 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.
- 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.

STANDARD ENGINE & SAFETY FEATURES

- High Coolant Temperature Automatic Shutdown
- Low Coolant Level Automatic Shutdown
- Low Oil Pressure Automatic Shutdown
- Overspeed Automatic Shutdown (Solid-state)
- Crank Limiter (Solid-state)
- Oil Drain Extension
- Radiator Drain
- Factory-Installed Cool Flow Radiator
- Closed Coolant System
- UV/Ozone Resistant Hoses
- Rubber-Booted Engine Electrical Connections
- Stainless Steel Flexible Exhaust Connection
- Battery Charge Alternator
- Battery Cables
- Battery Tray
- Sound Attenuation Enclosure

GENERATOR CONNECTIONS

- 24 Volt, Solenoid-activated Starter Motor
- Air Cleaner
- Fan GuardControl Console
- Isochronous Governor
- Jacket water heater
- Autosynchronizer
- Isochronous Load Sharing Module
- Reverse Power Protection Relay
- Dead Bus Sensing
- Sync Check Relay
- Main Line Circuit Breaker
- 2 Year Warranty
- Engine Coolant Heater
- Low Fuel Pressure
- 10 Amp Dual Rate Battery Charger
- Exhaust Silencer
- 1. 4 Wire load connections on Paralleling Contactor: Each phase will accept (2) 1/0 to 250MCM or (1) #4 to 600MCM aluminum or copper conductor.
- 2. 2 wire shielded cable (RS485) to Power Manager System Control.
- 3. 2 wire Twisted pair from Transfer switch (when multiple transfer switches are used) Can also go to the Power Manager System Controller.
- 4. 120 Volt 15 amp input circuit for Battery Charger.

OPTIONS

- OPTIONAL FUEL ACCESSORIES
 O Flex Fuel Lines
- OPTIONAL ELECTRICAL ACCESSORIES
 O Battery, 12 Volt
 - O Battery warmer
- GENERAC POWERMANAGER™ INTEGRATED ○ Controller and ATS Note 5 - See Spec 0167390SBY for additional information
- GENERAC POWERMANAGER™ SYSTEM ○ Controller Note 5 for Multiple Transer Switches See Spec 0167380SBY for Additional Information

- ADDITIONAL OPTIONAL EQUIPMENT
 - O 21 Light Remote Annunciator
 - O Remote Relay Panels
 - O GenLink[®] Communications Software
- OPTIONAL ENCLOSURE MATERIAL
 O Aluminum

Distributed by:

Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Generac dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.





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