



GeneratorJoe



Commercial Prime Series Model: 55 CP and CP-3

Ratings

Single and/or Three Phase Available

60 Hz Standby: kW 55.0
 kVA 55.0

Natural Gas Only

Features

- Single source responsibility for the generator set and accessories.
- Prototype and production tested to insure one step load acceptance per NFPA 110.
- Two year limited warranty on generator sets and accessories.
- Unit conforms to NEMA, UL, ANSI and other standards.
- Heavy duty 4 cycle industrial engine for reliability and fuel efficiency.
- Brushless rotating field generator with class H insulation.
- Heavy duty steel base with integral vibration isolators.
- Electronic Isochronous Governor.
- EPA .
- Aluminum powder coated housing.
- Deep Sea 7420 controller.
- ABB breakers.
- Extended oil/radiator drains.
- 6 Amp battery charger.

| Generator | Voltage | PH | Hz | Natural Gas | | Power Lead Connections |
|------------|---------|----|----|-------------|------|------------------------|
| | | | | kW/kVA | Amps | |
| 55 PR-1-1 | 120/240 | 1 | 60 | 55/55 | 229 | 4 Lead Dedicated 1 Ph |
| 55 PR-3-2 | 120/208 | 3 | 60 | 55/69 | 191 | 12 Lead Low Wye |
| 55 PR-3-3 | 120/240 | 3 | 60 | 55/69 | 166 | 12 Lead High Delta |
| 55 PR-3-4 | 277/480 | 3 | 60 | 55/69 | 83 | 12 Lead High Wye |
| 55 PR-3-5 | 127/220 | 3 | 60 | 55/69 | 181 | 12 Lead Low Wye |
| 55 PR-3-16 | 346/600 | 3 | 60 | 55/69 | 66 | 4 Lead Dedicated 3 Ph |

RATINGS: All single phase gen-sets are dedicated 4 lead windings, rated at unity (1.0) power factor. All three phase gen-sets are 12 lead windings, rated at (.8) power factor. 105°C "PRIME RATINGS" are strictly for gen-sets provide the prime source of electric power, where normal utility power is unavailable or unreliable. A 10% overload is allowed for a total of 1 hour, within every 12 hours of operation of PRIME RATED systems. All gen-set power ratings are based on temperature rise measured by resistance method as defined by MIL-STD 705C and IEEE STD 115, METHOD 6.4.4. All generators have class H (180°C) insulation system on both rotor and stator windings. All factory tests and KW/KVA charts shown above are based on 105°C (prime) R/R winding temperature, within a maximum 40°C ambient condition. Specifications & ratings are subject to change without prior notice.

ENGINE

Manufacturer General Motors
Model and Type Ind. Power Train Vortec, 5.7L, 4 cycle
Aspiration Natural
Cylinder Arrangement 8 Cylinders, V-8
Displacement Cu. In. (Liters) 350 (5.7)
Bore & Stroke In. (Cm.) 4 x 3.48 (10.2 x 8.8)
Compression Ratio 9.1:1
Main Bearings & Style 5M, 400 Copper Lead
Cylinder Head Hardened Cast Iron
Pistons High, Silicon Aluminum
Crankshaft Nodular Iron
Exhaust Valve Forged Steel
Governor Electronic
Frequency Reg. (no load-full load) Isochronous
Frequency Reg. (steady state) $\pm 1/4\%$
Air Cleaner Dry, Replaceable Cartridge
Engine Speed **1800 rpm**
Piston Speed, ft/min (m./min) 1044 (318)
Max Power, bhp (kwm) Prime/NG 85 (63)
Ltd. Warranty Period . 12 Months or 2000 hrs., first to occur

FUEL SYSTEM

Type NAT. GAS, Vapor Withdrawal
Fuel Pressure (kpa), in. H₂O* (1.74), 7"
Secondary Fuel Regulator NG Vapor System
Auto Fuel Lock-Off Solenoid Standard on all sets
Fuel Supply Inlet Line 1" NPTF
* Measured at gen-set fuel inlet, downstream of any dry fuel accessories.

FUEL CONSUMPTION

| NAT. GAS: FT ³ /HR (M ³ /HR) | PRIME |
|--|------------|
| 100% LOAD | 720 (20.3) |
| 75% LOAD | 626 (17.7) |
| 50% LOAD | 450 (12.7) |
| NG = 1000 BTU X FT ³ = Total BTU/HR | |

OIL SYSTEM

Type Full Pressure
Oil Pan Capacity qt. (L) 5.0 (4.7)
Oil Pan Cap. W/ filter qt. (L) 6.5 (6.2)
Oil Filter 1, Replaceable Spin-On

ELECTRICAL SYSTEM

Ignition System Electronic
Eng. Alternator and Starter:
Ground Negative
Volts DC 12
Max. Amp Output of Alternator 70
Recommended Battery to -18°C (0°F): 12 VDC, Size BC# 24F
Max Dimensions: 10 3/4" lg X 6 3/4" wi X 9" hi, with standard round posts. Min. output at 600 CCA. Battery tray (max. dim. at 12"lg x 7"wi), hold down straps, battery cables, and battery charger, is furnished. Installation of (1) starting battery is required, with possible higher AMP/HR rating, as described above, if normal environment averages -13°F (-25°C) or cooler.

COOLING SYSTEM

Type of System Pressurized, closed recovery
Coolant Pump Pre-lubricated, self-sealing
Cooling Fan Type (no. of blades) Pusher (10)
Fan Diameter inches (cm) 21" (533)
Ambient Capacity of Radiator °F (°C) 125 (51.6)
Engine Jacket Coolant Capacity Gal (L) 1.8 (6.8)
Radiator Coolant Capacity (including engine) Gal.(L) 5.2 (19.7)
Maximum Restriction of Cooling Air Intake
and discharge side of radiator in. H₂O (kpa) 0.5 (.125)
Water Pump Capacity gpm (L/min) 27 (100)
Heat Reject Coolant : Btu/min (kw) 3200 (54.9)
Low Radiator Coolant Level Shutdown Standard
Note: Coolant temp. shut-down switch setting at 220°F (104°C) with 50/50 (water/antifreeze) mix.

COOLING AIR REQUIREMENTS

Combustion Air, cfm (m³/min) 185 (5.2)
Radiator Air Flow cfm (m³/min) 6000 (170)
Heat Rejected to Ambient:
Engine: kw (btu/min) 30.9 (1760)
Alternator: kw (btu/min) 7.5 (430)

EXHAUST SYSTEM

Exhaust Outlet Size 2.5"
Max. Back Pressure in. hg (KPA) 3.0 (10.2)
Exhaust Flow, at rated kw: cfm (m³/min) 580 (16.5)
Exhaust Temp., at rated kw: °F (°C) 1200 (649)
Engines are EPA certified for Natural Gas.



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ALTERNATOR SPECIFICATIONS

STANDARDS: Marathon MagnaPlus and MagnaMax generators meet UL Listed Electric Generator, American and other international standards such as: NEMA MG1-22, BS5000, CAS C22.2, IEC 34-1 AND VDE 0530. Other standards and certifications can be considered upon request. (Both MagnaPlus & MagnaMax series are built with NEMA Class H Insulation materials or better which are normally rated at 190C degrees total temperature by NEMA however UL laboratories demands the total temperature be derated to a maximum of 160C total temperature when "UL LISTED").

VOLTAGE REGULATOR: SE350, supplied with standard MagnaPlus units and excitation system have solid state voltage build-up, encapsulated for humidity and abrasion protection, 1% regulation, volts per hertz operation, over excitation shutdown, stability adjust and built-in voltage adjustment.

PM300 (optional on MagnaPlus) Supplied with optional PMG excitation support have solid state voltage build-up, encapsulated for humidity and abrasion protection, 1% regulation, volts per hertz operation, over excitation shutdown, stability adjust and built-in voltage adjustment.

DVR2000E+ (optional for MagnaPlus) Standard on MagnaMax voltage regulator and PMG excitation support system are digital, microprocessor design with solid state voltage build-up, encapsulated for humidity and abrasion protection, 1/4% regulation, true volts per hertz operation with adjustable cut in, loss of sensing continuity shutdown, over excitation shutdown, 3 phase RMS sensing, over voltage

protection, and provisions for parallel operation.

PMG Excitation Support System (Standard on MagnaMax) Optional for MagnaPlus, permanent magnet generator excitation support system, minimum short circuit support current of 300% of the rating (250% for 50 hertz) for 10 seconds.

INSULATION SYSTEM: Meet UL1446, UL2200 requirements. Class H materials or better.

MAIN ROTOR: MagnaPlus main rotating field construction shall consist of one piece, four pole laminations, incorporate amortisseur windings to facilitate parallel operation and application to voltage distorting loads. In addition, the amortisseur winding and field pole coil supports may be integrally die cast with the rotor laminations to form a unitized rotor core. The rotating assembly shall be dynamically balanced to less than 2 mils-peak-to-peak-displacement, and shall be designed to have an over speed withstand of 125% of rated speed for 15 minutes when operating at stable rated operating temperature.

VERIFICATION OF PERFORMANCE: (MagnaPlus series) All certified performance and temperature rise test data submitted by generator manufacturer are to be the result of the actual test of the same or duplicate generators. Temperature rise data shall be the result of loaded, rated power factor heat runs at the rated voltage and hertz. All performance testing shall be done in accordance with MIL-STD-705 and/or IEEE Standard-115. Generators are manufactured using production procedures & quality assurance to ISO9001:2008.

DEEP SEA 7420 DIGITAL MICROPROCESSOR CONTROLLER



The 7420 controller is an auto start mains (utility) failure module for single gen-set applications. This controller includes a backlit LCD display which continuously displays the status of the engine and generator at all times.

The 7420 controller will also monitor speed, frequency, voltage, current, oil pressure, coolant temp., and fuel levels. These modules have been designed to display warning and shut down status. It also includes: (11) configurable inputs alerts • (8) configurable outputs alerts • voltage monitoring • mains (utility) failure detection • (250) event logs • configurable timers • automatic shutdown or warning during fault detection • remote start (on load) • engine preheat • advanced metering capability • hour meter • text LCD displays • protected solid state outputs • test buttons for: stop/reset • manual mode • auto mode • lamp test • start button • power monitoring (kWh, kVAR, kVAh, kVArh)

This controller includes the 7420 expansion features including RS232, RS484 (using MODBUS-RTU/TCP), direct USB connection with PC, expansion optioned using DSE-Net for remote annunciation and remote relay interfacing for a distance of up to 3300FT. The controller software is freely downloadable from the internet and allows monitoring with direct USB cable, LAN, or by internet via the built in web interface.



Further expansion is available by adding the optional "WebNet" gateway interface module. This device will allow comprehensive monitoring of the generator via the cloud including identification, location, and status. Some advantages of this module include: reduced site visits and maintenance costs • remote fuel management • fault analysis • asset tracking • automatic system alerts • maximized system up-time.

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Standard Features and Optional Accessories

Standard Features

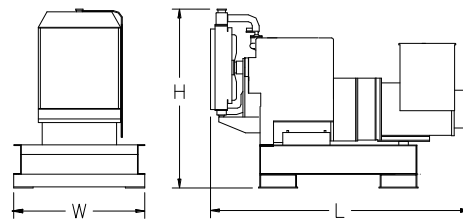
- **Heavy duty steel base**
- **Vibration isolators**
- **Oil/radiator drain valve with extension**
- **Battery charger**
- **Battery cables/rack**
- **Circuit breaker**
- **Owners manual**
- **Electronic Isochronous Governor**

Weights and Dimensions

Overall Size, L x W x H, in.: 78 in. x 42 in. x 38 in.

Weight (Wet): 1,931 lbs.

Note: Dim and weights reflect standard open unit with no options



Note: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

Optional Accessories

- ☐ PMG
- ☐ PMG with DVR regulator
- ☐ Block heater
- ☐ Battery heater
- ☐ Battery charger upgrades (10-20 amp)
- ☐ E-stop
- ☐ Enclosure lights
- ☐ Liquid LP withdrawal
- ☐ Dual fuel
- ☐ WebNet gateway (remote monitoring)
- ☐ NFPA 110 compliance package
- ☐ 3 phase sensing
- ☐ Generator strip heater
- ☐ 8 Lamp Annunciator panel
- ☐ Weather enclosure with internal muffler
- ☐ Hospital grade silencers
- ☐ Oil pan heater
- ☐ Flexible fuel lines



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Made in the USA!



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