Genset Ratings

Standby Power Rating
2000 kW  2500 kVA  60 Hz

Prime Power Rating*
1800 kW  2250 kVA  60 Hz

*EPA Certified Prime Ratings are not available in the US or its Territories

Powering Ahead

For over 50 years, Generac has led the industry with innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac’s gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial application under adverse conditions.

Generac is committed to ensuring our customers’ service support continues after their generator purchase.

Standby and Prime Power Features

✓ Heavy-duty industrial diesel engine that meets the latest EPA emissions levels
✓ Brushless synchronous alternators with dynamic balancing and four pole construction
✓ Fully featured microprocessor based controller that’s easy to use and field programmable for customized installations
✓ Generator sets are prototype tested and production tested to ensure easy startup
✓ Gen-set accepts rated load in one step
✓ Heavy duty construction that’s designed for use in prime or standby applications
✓ Manufactured in a dedicated and secure ISO-9001 certified facility
✓ Generator sets are backed by a world wide network of parts and service centers
✓ Optional agency approvals available including UL2200 and NFPA110
✓ Optional environmental enclosures available including weather resistant, sound attenuated, containerized, and walk-in models
✓ Full range of genset accessories and factory installed options available

Genset Ratings

<table>
<thead>
<tr>
<th>Genset Model Number</th>
<th>Alternator</th>
<th>Voltage L-N / L-L</th>
<th>Phase</th>
<th>Hertz</th>
<th>150°C Rise Standby Rating</th>
<th>125°C Rise Prime Rating</th>
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</table>

NOTES: Standby – Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.
Prime – Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications.
Power ratings in accordance with ISO 8528-1, Second Edition dated 2005-06-01, definitions for Prime Power (PPP) and Emergency Standby Power (ESP),
**Alternator Specifications**

- **Alternator Type**: 4-Pole, Rotating Field
- **Exciter Type**: Brushless
- **Excitation System**: PMG
- **Insulation**: per NEMA MG1
- **Material**: Class H
- **Standby Temp Rise**: 150°C
- **Prime Temp Rise**: 125°C
- **Lead Connection**: 6 Lead, Reconnectable
- **Stator Pitch**: 2/3
- **Amortisseur Winding**: Full
- **Bearing**: Single, Double Shielded
- **Drive Coupling**: Flexible Disk
- **Unbalanced Load**: 20% of Standby Rating

**Automatic Voltage Regulator**

- **PMG**: Std MX321
- **Voltage Regulation**: No Load to Full Load
- **PMG Regulator**: +/- 0.5%
- **Load Acceptance**: 100% of Rating, One Step

- **Subtransient Reactance**: 15%
- **TIF (1960 Weighting)**: <50
- **Line Harmonics**: 5% Maximum
- **Motor Starting kVA**: 30% Max Voltage Dip
- **Alt @ 480V SkVA**: PI734F-312 - 6600
- **Alt @ 480V SkVA**: PI734G-312 - 3920

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**Generac InteliGen NT Features**

- **Large back-lit graphical LCD Display**: 64x128 pixel resolution
- **Sealed Membrane Panel to IP65**
- **Push Buttons for Simple Control**: Start, Stop, Fault Reset, Horn Reset, Mode, Page, and Enter Keys
- **Display Metering and Protection**: Oil Pressure Warning / Shutdown
- **High/Low Coolant Temperature Warning**
- **High Coolant Temperature Shutdown**
- **Low Coolant Level Shutdown**
- **Low Fuel Level Warning / Shutdown**
- **Over Speed Protection**
- **Battery Voltage Under/Over Warning**
- **Running Hour Meter**
- **Generator Under/Over Volts Warn/Shutdown**
- **Generator Under/Over Freq Warn/Shutdown**
- **Generator Over Current Shutdown**
- **Generator Output Metering for V1-V3, I1-I3, Hz, kW, kWh, kVAR, kVAh**
- **User Configurable Inputs and Outputs**
- **Up to 500 Event Based History Records**
- **Integrated PLC Programming Functions**
- **Interface to Remote Display or Remote Annunciator**
- **Controller capable of Both Single or Multiple Gensets Operating in Standby or Parallel Modes**

**NFPA110 Compliance**

- An optional Remote Annunciator is available to meet NFPA110 applications
- **Remote Annunciator Features – RA15**: 15 LED Indicators with Function Labels, Horn Reset and Lamp Test keys, CAN Bus Connection for up to 600 Feet
### Engine Application Data

#### Engine Specifications
- **Manufacturer**: Mitsubishi
- **Engine Model #**: S16R-Y2PTAW2-1
- **Engine Type**: 4 Cycle, 16 Cylinder
- **Induction System**: Turbocharged, Inter Cooler
- **Displacement, L (in\(^3\))**: 65.4 (3989)
- **EPA Emissions Level**: Tier 2
- **HP at Rated Speed BHP (kW\(_m\))**: 2923 (2181)
- **Rated RPM**: 1800
- **Bore and Stroke in(mm)**: 6.69 x 7.09 (170 x 180)
- **Compression Ratio**: 14.0:1
- **Governor Type/Model**: Proact2
- **Governor Manufacturer**: Woodward
- **Freq Reg NL to FL**: Isochronous
- **Freq Reg Steady State**: +/- 0.25%

#### Engine Electrical System
- **Charging Alternator Volts dc**: 24
- **Charging Alternator Amps**: 30
- **Grounding Polarity**: Negative
- **Starter Motor Volts dc**: 24
- **Battery Recommendations**:
  - Battery Volts dc: 24
  - Min Cold Cranking Amps: 1100
  - Quantity Required: 4

#### Ventilation Requirements
- **Cooling Airflow scfm(cmm)**: 102700 (2909)
- **Combustion Airflow cfm(cmm)**: 7274 (206)
- **Heat Rejected to Ambient**:
  - From Engine Btu/min(kW): 44374 (780.0)
  - From Alternator Btu/min(kW): 5687 (100)
- **Recommended Free Area Intake**: 220.0 (20.45)

#### Engine Lubrication System
- **Oil Pan Capacity**: 52.8 (200.0) gal(L)
- **Oil Pan w/Filter**: 60.8 (230.0) gal(L)
- **Oil Filter Quantity**: 4
- **Oil Filter Type**: Cartridge
- **Oil Cooler**: Water Cooled
- **Recommended Oil**: 15W-40
- **Oil Press psi(kPa)**: 71 (490)

#### Engine Cooling System
- **Genset Max Ambient Temp °F(°C)**: 113 (45)
- **Engine Coolant Cap**: 179.6 (169.9) qt(L)
- **Engine + Radiator System Cap**: 673.0 (636.8) qt(L)
- **Water Pump Type**: Centrifugal
- **Coolant Flow gpm (Lpm)**: 489 (1850.9)
- **Charge Cooler Flow gpm (Lpm)**: 243 (919.8)
- **Heat Rejected to Cooling Water @ Rated kW; Btu/min (kW)**: 44374 (780.0)
- **Heat Rejected to Charge Cooler @ Rated kW; Btu/min (kW)**: 44374 (780.0)
- **Heat Rejected to Ambient Air @ Rated kW; Btu/min (kW)**: 10240 (180.0)
- **Max Restriction of Cooling Air inH\(_2\)O(kPa)**: 0.5 (0.124)

#### Engine Exhaust System
- **Exhaust Manifold Type**: Dry
- **Exhaust Flow @ Rated kW cfm(cmm)**: 19209 (544)
- **Exhaust Temp (dry manifold) °F(°C)**: 987 (516)
- **Max Back Pressure inH\(_2\)O(kPa)**: 23.6 (5.9)
- **Exhaust Outlet Diameter in(mm)**: 13.39 (340)
- **Exhaust Outlet Type**: JIS350A (approx 14")

#### Engine Fuel System
- **Recommended Fuel**: #2 Diesel
- **Fuel Line at Engine**:
  - Supply Line Min ID in(mm): 1 (25)
  - Return Line Min ID in(mm): 1 (25)
- **Fuel Pump Type**: Engine Driven
- **Fuel Pump Max Lift ft (m)**: 3 (1)
- **Max Flow to Pump gph(Lph)**: 330.3 (1250.2)
- **Fuel Filter**:
  - Secondary Filter: 4 µm
  - Secondary Water Separator: Not Included
  - Primary Filter: Optional
  - Primary Water Separator: Optional

#### Fuel Consumption – Standby Rating
- **100% Load gph(Lph)**: 159.4 (603.3)
- **75% Load gph(Lph)**: 117 (442.8)
- **50% Load gph(Lph)**: 80.8 (305.8)
- **25% Load gph(Lph)**: 46.2 (174.9)

#### Fuel Consumption – Prime Rating
- **100% Load gph(Lph)**: 145 (548.8)
- **75% Load gph(Lph)**: 106.5 (403.1)
- **50% Load gph(Lph)**: 73.6 (278.6)
- **25% Load gph(Lph)**: 42.1 (159.3)

#### Engine Output Deratings - Standby
- **Rated Temp**: 40°C
- **Rated Altitude**: 1500 m
- **Max Altitude**: 5000 m
- **Temperature Derate**: -5% / 10°C
- **Altitude Derate**: -1% / 100 m
Additional Standard Genset Features

- Structural Steel Sub-Base
- Sub-Base Lifting Eyes
- Unit Mounted Radiator
- Radiator Mounted Fan
- Fan Guard
- Battery Charging Alternator
- Battery Rack and Cables
- Unit Mounted Control Panel
- Spin-On Filters for Oil and Fuel
- Enamel Finish
- One Set - Operation / Maintenance Manual
- Factory Tested Prior to Shipment
- Limited Warranty

Available Accessories and Options

**Open Unit**
- Industrial Silencer
- Critical Silencer
- Exhaust Flex Pipe
- Rain Cap
- Radiator Duct Flange

**Enclosed Units**
- Weather Resistant Enclosure
- Sound Attenuated w/Internal Critical Silencer
- ISO Container
- Walk-In Enclosure

**Alternator Accessories**
- PMG Exciter and AVR Upgrade
- Alternator Space Heater
- Exciter Field Circuit Breaker
- Alternator Drip Shield

**Genset Accessories**
- Voltage Adjust Potentiometer
- Starting Battery
- Battery Charger
- Auto/Float Equalize Timer
- Manual
- Automatic
- Battery Heater
- Engine Coolant Heater
- Oil & Coolant Drain Valves (Engine/Radiator)
- Oil & Coolant Drain Extended to Base
- Main Output Breaker
- Wall Mount
- Unit Mount
- Transfer Switch
- Manual
- Automatic

**Control Panel**
- Remote Annunciator
- Remote Communications
- Remote E-Stop

**Fuel System and Sub-Base Fuel Tank**
- Sub-Base Tank
- Single Wall
- Double Wall
- UL142 Double Wall with Containment
- Tank Run Time @ 100% Load
  - 12-16 Hours
  - 24-36 Hours
- Flex Fuel Line
- Primary Fuel / Water Separator

**Vibration Isolators**
- Location
- Under Tank
- Between Tank
- Elastomer Isolator
- Pad Isolator
- Standard Spring
- Spring for Seismic Zone 4

Optional Agency Approvals

- UL2200 (Review Option Availability)
- NFPA110 (Request Remote Annunciator)

Weight and Dimensions (Open Unit)

- Weight – Wet lb(kg): 32190 (14601)
- Overall Dimensions: 236 x 107 x 114 inches, 5994 x 2718 x 2896 mm

Note: Drawing is provided for reference only. Use engineering outline for installation planning.

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