GAS GENERATOR SET
MTU 10V0068 GS125

125 kWe / 60 Hz / Standby
208 - 600V

SYSTEM RATINGS

<table>
<thead>
<tr>
<th>Standby</th>
<th>240V/1A</th>
<th>240/2A</th>
<th>270/2A</th>
<th>270/3A</th>
<th>300V/1A</th>
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<tr>
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<td>3</td>
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<td>Phases</td>
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<td>1</td>
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<tr>
<td>PF</td>
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<td>Hz</td>
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<tr>
<td>Natural Gas Ratings: Amps</td>
<td>521</td>
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<td>434</td>
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<td>151</td>
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<td>Natural Gas Ratings: kW/kVA</td>
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<td>125/125</td>
<td>125/154.25</td>
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<tr>
<td>LP Gas Ratings: Amps</td>
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<td>521</td>
<td>434</td>
<td>376</td>
<td>198</td>
<td>151</td>
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<tr>
<td>LP Gas Ratings: kW/kVA</td>
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<td>125/154.25</td>
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<td>skVA@30%</td>
<td>194</td>
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<td>Voltage Delta</td>
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<td>323</td>
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<td>430</td>
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<tr>
<td>Generator Model</td>
<td>431/PSL/224</td>
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<tr>
<td>Temp Rise</td>
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<td>130 °C/40 °C</td>
<td>130 °C/40 °C</td>
<td>130 °C/40 °C</td>
<td>130 °C/40 °C</td>
<td>130 °C/40 °C</td>
<td>130 °C/40 °C</td>
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<tr>
<td>Connection</td>
<td>4 LEAD</td>
<td>12 LEAD ZIG-ZAG</td>
<td>12 LEAD LOW WYE</td>
<td>12 LEAD HI DELTA</td>
<td>12 LEAD HI DELTA</td>
<td>12 LEAD LOW WYE</td>
<td>4 LEAD WYE</td>
</tr>
</tbody>
</table>

** UL 2200 Listed

Note: This unit is available with a dual fuel configuration.

CERTIFICATIONS AND STANDARDS

// Generator set is designed and manufactured in facilities certified to standards ISO 9001:2008 and ISO 14001:2004

// UL 2200 / CSA - Optional
- UL 2200 Listed
- CSA Certified

// Performance Assurance Certification (PAC)
- Generator Set Tested to ISO 8528-6 for Transient Response
- Verified product design, quality and performance integrity
- All engine systems are prototype and factory tested

// Power Rating
- Accepts Rated Load in One Step Per NFPA 110

Remington, Vennick & Arrango Engineer's Comments:
- No Exceptions Taken
- Resubmit 2 copies
- Approved as Noted
- Rejected

These shop drawings have been reviewed for general conformance with the contract plans and specifications. Writings or opinions shall not be construed as relieving the contractor from compliance with the contract documents nor does it authorize any extra work. Contractors shall check and certify all quantities, dimensions and accuracy as required for a complete and functional project.

Checked by: __________ Date: __________/__/____
STANDARD FEATURES

- MTU Onsite Energy is a single source supplier
- Global Product Support
- 2 Year Standard Warranty
- 6.8L Engine
  - 6.8 Liter Displacement
  - 4-Cycle
- 3-Way Catalyst
- Optional Fuels: LP Liquid and Dual Fuel
- Engine-generator resilient mounted
- Complete Range of Accessories

// Generator
- Brushless, Rotating Field Generator
- 2/3 Pitch Windings
- 300% Short Circuit Capability
- Digital Control Panel
  - UL Recognized, CSA Certified, NFPA 110
  - Complete System Metering
  - LCD Display
- Cooling System
  - Integral Set-Mounted
  - Engine Driven
  - Approved as Noted
  - Rejected

These shop drawings have been reviewed for general conformance with the contract plans and specifications. Modifications or comments shall not be construed as relieving the contractor from compliance with the contract documents nor does it authorize any extra work. Contractors shall check and certify all quantities, dimensions and accuracy as required for a complete and functional product.

Checked By: [Signature] Date: [Date]

STANDARD EQUIPMENT

// Engine
- Heavy Duty Air Cleaner
- Oil Pump
- Oil Drain Extension & S/O Valve
- Full Flow Oil Filter
- Jacket Water Pump
- Throttle
- Blower Fan & Fan Drive
- Radiator - Unit Mounted
- Electric Starting Motor - 12V
- Governor - Electronic Isochronous
- Base - Formed Steel
- SAE Flywheel & Bell Housing
- Charging Alternator - 12V
- Battery Rack & Cables
- Flexible Exhaust Connection
- Liquid Cooled, Ball Bearing Turbocharger
- EPA Certified Engine

// Generator
- NEMA MG1, IEEE and ANSI standards compliance for temperature rise and motor starting
- Sustained short circuit current of up to 300% of the rated current for up to 10 seconds
- Self-ventilated
- Superior Voltage Waveform
- Solid State, Volts-per-Hertz Regulator
- ±1% Voltage Regulation No Load to Full Load

Brushless Alternator with Brushless Pilot Exciter
- 4 Pole, Rotating Field
- 130 °C Maximum Standby Temperature Rise
- 1 Bearing, Sealed
- Flexible Coupling
- Full Amortisseur Windings
- 125% Rotor Balancing
- 3-Phase Voltage Sensing
- 100% of Rated Load - One Step
- 5% Maximum Total Harmonic Distortion

// Digital Control Panel(s)
- Digital Metering
- Engine Parameters
- Generator Protection Functions
- Engine Protection
- SAE J1939 Engine ECU Communications
- Windows®-Based Software
- Multilingual Capability
- Remote Communications to RDP-110 Remote Annunciator
- Programmable Input and Output Contacts
- UL Recognized, CSA Certified, CE Approved
- Event Recording
- IP 54 Front Panel Rating with Integrated Gasket
- NFPA 110 Compatible

* Represents standard product only. Consult Factory/MTU Onsite Energy Distributor for additional configurations.
APPLICATION DATA

// Engine

Manufacturer: Ford
Model: 6.8LV10
Type: 4-Cycle
Aspiration: Turbocharged, Intercooled
Arrangement: 10-V
Displacement: L (in³): 6.8 (415)
Bore: cm (in): 9 (3.55)
Stroke: cm (in): 10.6 (4.17)
Compression Ratio: 9:1
Rated RPM: 1,800
Engine Governor: Bosch
Maximum Power (NG): kW (bhp): 154 (207)
Maximum Power (LP): kW (bhp): 154 (207)
Speed Regulation: C/F
Air Cleaner: Dry

// Fuel Consumption (NG-1000 RTU/ft² / L-P-2500 RTU/ft²)

<table>
<thead>
<tr>
<th></th>
<th>NG</th>
<th>LPG</th>
</tr>
</thead>
<tbody>
<tr>
<td>At 100% of Power Rating: m³/hr (ft³/hr)</td>
<td>41.4 (1,463)</td>
<td>18.1 (640)</td>
</tr>
<tr>
<td>At 75% of Power Rating: m³/hr (ft³/hr)</td>
<td>32.9 (1,161)</td>
<td>14.8 (506)</td>
</tr>
<tr>
<td>At 50% of Power Rating: m³/hr (ft³/hr)</td>
<td>24 (849)</td>
<td>10.4 (365)</td>
</tr>
</tbody>
</table>

// Cooling - Radiator System

Ambient Capacity of Radiator: °C (°F): 50 (122)*
Maximum Pressure of Cooling Air, Intake, and Discharge Side of Radi.: kPa (in. H₂O): 0.12 (0.5)
Water Pump Capacity: L/min (gpm): 123 (32.5)
Heat Rejection to Coolant: kW (BTU/M): 85.3 (4,850)
Heat Radiated to Ambient: kW (BTU/M): 39.82 (2,265)
Heat Rejected to Charge Air Cooler: kW (BTU/M): 14.1 (800)
Fan Power: kW (hp): 9.1 (12.2)

* Installation of enclosures reduces the ambient capacity of the cooling system by 3 °C (5.4 °F).

// Liquid Capacity (Lubrication)

Total Oil System: L (gal): 5.7 (1.5)
Engine Jacket Water Capacity: L (gal): 6.1 (1.6)
System Coolant Capacity: L (gal): 35.04 (9.26)

// Electrical

Electric Volts DC: 12
Cold Cranking Amps Under -17.8 °C (0 °F): 925

// Fuel Inlet

Fuel Supply Connection Size: 1 1/2" NPT
Fuel Supply Pressure: min H₂O (in. H₂O): 178-279 (7-11)

// Air Requirements

NG and LPG

Aspiration: m³/min (SCFM): 7.8 (275)
Air Flow Required for Rad.
Cooled Unit: m³/min (SCFM): 256 (9,056)
Remote Cooled Applications;
Air Flow Required for Dissipation of Radiated Gen-ex Heat for a Max of 25 °F Rise: m³/min (SCFM): 144.6 (5,108)

* Air density = 1.184 kg/m³ (0.0739 lbm/ft³)

// Exhaust System

NG and LPG

Gas Temp (Stack): °C (°F): 649 (1,200)
Gas Voluam at Stack
Temp: m³/min (CFM): 25.1 (886)
WEIGHTS AND DIMENSIONS

Remington, Verizk & Arrigo Engineer's Comments:
Yes, No Exceptions Taken   No, Rejected   Copies.
Option as Noted

These shop drawings have been reviewed for general conformance with the contract plans and specifications. It should be noted that no design changes will be authorized by the contractor for the following reasons:
- Drawings or specifications have not been reviewed by the contractor.
- Errors or omissions are not covered by the contract.
- Changes are not covered by the contract.

Checked By: 5.5 Date: 7.15

Drawing shown for illustrative purposes only, based on standard open frame 480 volt generator set. Lengths may vary with other voltages. Do not use for installation design. See website for unit specific information drawings.

Open Power Unit (OPU)
2,911 x 1,137 x 1,556-mm (86.25 x 44.75 x 61.25-in) 1,293 kg (2,850 lb)

Weights and dimensions are based on open power units and are estimates only. Consult the factory for accurate weights and dimensions for your specific generator set.

SOUND DATA

Open Power Unit (OPU) 85 83

Sound data is provided at 2 m (23 ft). Generator set tested in accordance with ISO 8528-10 and with infinite exhaust.

EMISSIONS DATA

Natural Gas 0.4 0.04
Liquefied Propane 0.2 0.04

All units are in g/kWh and are EPA weighted cycle values. Emission levels of the engine may vary with ambient temperature, barometric pressure, humidity, fuel type and quality, installation parameters, measuring instrumentation, etc. The data was obtained in compliance with US EPA regulations.

RATING DEFINITIONS AND CONDITIONS

// Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. No overloads capability for this rating. Ratings are in accordance with ISO 3046-1, BS 5514, and AS 2789. Average load factor: ± 5%.

// Derating Factor:
Altitude: Consult your local MTU Onsite Energy Power Generation Distributor for altitude derations.
Temperature: Consult your local MTU Onsite Energy Power Generation Distributor for temperature derations.

C/F = Consult Factory/MTU Onsite Energy Distributor
N/A = Not Available