

ATTACHMENT
A

GAS GENERATOR SET MTU 10V0068 GS125

125 kW / 60 Hz / Standby
208 - 600V



SYSTEM RATINGS

Standby

208V/3/60	240V/3/60	240V/3/60	480V/3/60	480V/3/60	600V/3/60	600V/3/60
Phase	1	1	3	3	3	3
PF	1	1	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60	60
Natural Gas						
Ratings: Amps	521	521	434	376	188	151
Natural Gas						
Ratings: kW/kVA	125/125	125/125	125/156.25	125/156.25	125/156.25	125/156.25
LP Gas						
Ratings: Amps	521	521	434	376	188	151
LP Gas						
Ratings: kW/kVA	125/125	125/125	125/156.25	125/156.25	125/156.25	125/156.25
skVA@30%						
Voltage Dip	196	130	323	323	430	331
Generator Model	431PSL6224	431CSL6204	363CSL1607	363CSL1607	363CSL1607	363PSL1658
Temp Rise	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C
Connection	4 LEAD	12 LEAD ZIG-ZAG	12 LEAD LOW WYE	12 LEAD HI DELTA	12 LEAD HI WYE	4 LEAD WYE

** UL 2200 Offered

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

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

// UL 2200 / CSA - Optional

- UL 2200 Listed
- CSA Certified

// Performance Assurance Certification (PAC)

- Generator Set Tested to ISO 8528-5 for Transient Response
- Verified product design, quality and performance integrity
- All engine systems are prototype and factory tested

Remington, Vernick & Arango Engineer's Comments:

- ☒ No Exceptions Taken
- ☐ Resubmit _____ Copies
- ☐ Approved as Noted
- ☐ Rejected

These shop drawings have been reviewed for general conformance with the contract plans and specifications. Markings 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 project.

Checked By GS Date 7/6/15

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

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STANDARD EQUIPMENT*

Checked By CS Date 7/6/15

// Engine

Heavy Duty Air Cleaner
 Oil Pump
 Oil Drain Extension & S/O Valve
 Full Flow Oil Filter
 Jacket Water Pump
 Thermostat
 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

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

// Generator

NEMA MG 1, 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

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

APPLICATION DATA

// Engine

Manufacturer	Ford
Model	6.8L V10
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): kWm (bhp)	154 (207)
Maximum Power (LP): kWm (bhp)	154 (207)
Speed Regulation	C/F
Air Cleaner	Dry

// 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 (9.25)

// 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: mm H ₂ O (In. H ₂ O)	178-279 (7-11)

// Fuel Consumption (NG-1000 BTU/ft³ / LP-2500 BTU/ft³)

	NG	LPG
At 100% of Power Rating: m³/hr (ft³/hr)	41.4 (1,463)	18.1 (640)
At 76% of Power Rating: m³/hr (ft³/hr)	32.9 (1,161)	14.8 (506)
At 50% of Power Rating: m³/hr (ft³/hr)	24 (849)	10.4 (366)

// Cooling - Radiator System

	NG and LPG
Ambient Capacity of Radiator: °C (°F)	50 (122)*
Maximum Restriction of Cooling Air, Intake, and Discharge Side of Rad.: kPa (in. H ₂ O)	0.12 (0.5)
Water Pump Capacity: L/min (gpm)	123 (32.5)
Heat Rejection to Coolant: kW (BTUM)	85.3 (4,850)
Heat Radiated to Ambient: kW (BTUM)	39.82 (2,265)
Heat Rejected to Charge Air Cooler: kW (BTUM)	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).

// Air Requirements

	NG and LPG
Aspirating: *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-set Heat For a Max of 25 °F Rise: *m³/min (SCFM)	144.6 (5,107)

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

// Exhaust System

	NG and LPG
Gas Temp. (Stack): °C (°F)	649 (1,200)
Gas Volume at Stack	
Temp: m³/min (CFM)	25.1 (886)
Maximum Allowable	
Back Pressure: kPa (in. H ₂ O)	6.2 (25)

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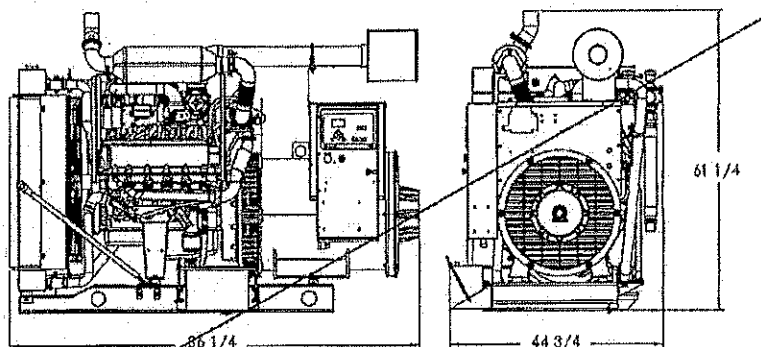
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WEIGHTS AND DIMENSIONS

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Drawing above for illustration purposes only, based on standard open power 480 volt generator set. Lengths may vary with other voltages. Do not use for installation design. See website for unit specific template drawings.

Weight	Dimension (L x W x H)	Weight (kg)
Open Power Unit (OPU)	2,191 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

Level 0: Open Power Unit dB(A)	83	83
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Sound data is provided at 7 m (23 ft). Generator set tested in accordance with ISO 8528-10 and with infinite exhaust.

EMISSIONS DATA

Fuel	HC (ppm)	CO (ppm)
Natural Gas	0.4	0.04
Liquid Propane	0.11	0.16

All units are in g/hp-hr 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 overload capability for this rating. Ratings are in accordance with ISO 3046-1, BS 5514, and AS 2789. Average load factor; $\leq 85\%$.

// Deration 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

MTU Onsite Energy
 A Rolls-Royce Power Systems Brand

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