

# GAS ENGINE-GENERATOR SET

## 100-GC6NLT1

100 ekW / 60 Hz / Standby  
208 - 600V



### SYSTEM RATINGS

#### Standby

Voltage (L-L)	240V**	240V**	208V**	240V**	480V**	600V**
Phase	1	1	3	3	3	3
PF	1.0	1.0	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60	60
Natural Gas						
Ratings: Amps	354	354	323	280	140	112
Natural Gas						
Ratings: kW/kVA	85/85	85/85	93/116.25	93/116.25	93/116.25	93/116.25
LP Gas						
Ratings: Amps	396	396	347	301	150	120
LP Gas						
Ratings: kW/kVA	95/95	95/95	100/125	100/125	100/125	100/125
skVA@30%						
Voltage Dip	136	195	250	250	273	273
Generator Model*	431CSL6204	431PSL6224	363CSL1607	363CSL1607	362CSL1606	362PSL1636
Temp Rise	130°C/27°C	125°C/40°C	130°C/27°C	130°C/27°C	130°C/27°C	125°C/40°C
Connection	12 LEAD ZIG-ZAG	4 LEAD	12 LEAD LOW WYE	12 LEAD HI DELTA	12 LEAD HI WYE	4 LEAD WYE

\* The Generator Model Number identified in the table is for standard C Series Configuration. Consult the factory for alternate configuration.

\*\* UL2200 Offered

### FACTS

- // Engine-Generator Set Tested to ISO 8528-5 for Transient Response
- // UL2200, CSA Listing Offered
- // Accepts Rated Load in One Step Per NFPA 110, Level 1
- // All engine-generator sets are prototype and factory tested
- // MTU Onsite Energy is a single source supplier
- // Global Product Support
- // 2 Year Standard Warranty
- // Custom Design for Any Application
- // 8.1 L Engine
  - 8.1 Liter Displacement
  - 4-Cycle
- // Integral Vibration Isolators
- // 3-Way Catalyst
- // Complete Range of Accessories
- // Permanent Magnet Generator (PMG) - Optional
  - Brushless, Rotating Field
  - 300% Short Circuit Capability
  - 2/3 Pitch Windings
- // Digital Control Panel(s)
  - UL Recognized, cULus, NFPA 110
  - Complete System Metering
  - LCD Display
- // Cooling System
  - Integral Set-Mounted
  - Engine Driven Fan

## STANDARD EQUIPMENT

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### // Engine

Air Cleaner  
 Oil Pump  
 Full Flow Oil Filter  
 Jacket Water Pump  
 Thermostat  
 Exhaust Manifold - Dry  
 Blower Fan & Fan Drive  
 Radiator - Unit Mounted  
 Electric Starting Motor - 12V  
 Governor - Electric Isochronous  
 Base - Formed Steel  
 SAE Flywheel & Bell Housing  
 Charging Alternator - 12V  
 Battery Box & Cables  
 Flexible Fuel Connectors  
 Flexible Exhaust Connection  
 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 and Drip-Proof  
 Superior Voltage Waveform  
 Digital, Solid State, Volts-per-Hertz Regulator  
 No Load to Full Load Regulation  
 Brushless Alternator with Brushless Pilot Exciter  
 4 Pole, Rotating Field  
 130°C Standby Temperature Rise  
 1 Bearing, Sealed  
 Flexible Coupling  
 Full Amortisseur Windings  
 125% Rotor Balancing  
 3-Phase Voltage Sensing  
 ±1% Voltage Regulation  
 100% of Rated Load - One Step  
 3% Maximum Harmonic Content

### // 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 our RDP-110 Remote Annunciator  
 16 Programmable Contact Inputs  
 7 Contact Outputs  
 UL Recognized, us, CE Approved  
 Event Recording  
 IP 54 Front Panel Rating with Integrated Gasket  
 NFPA110 Level Compatible

## APPLICATION DATA

### // Engine

Manufacturer	GM
Model	8.1L
Type	4-Cycle
Arrangement	8-V
Displacement: Cu In (lit)	496 (8.1)
Bore: in (cm)	4.25 (10.8)
Stroke: in (cm)	4.37 (11.1)
Compression Ratio	9.1:1
Rated RPM	1,800
Engine Governor	Bosch
Max Power: Standby: bhp (kWm)	164.4 (122.6)
Speed Regulation	±1%
Frequency	60 Hz
Air Cleaner	Dry

### // Liquid Capacity (Lubrication)

Total Oil System: gal (lit)	2 (7.6)
Engine Jacket Water Capacity: gal (lit)	3.6 (13.7)
System Coolant Capacity: gal (lit)	8.4 (31.8)

### // Electrical

Electric Volts DC	12
Cold Cranking Amps Under 0°F (-17.8°C)	600

### // Fuel Inlet

Fuel Supply Connection Size	1 1/2" NPT
Fuel Supply Pressure: in. H <sub>2</sub> O (mm H <sub>2</sub> O)	7-11 (178-279)

### // Fuel Consumption (NG-1000 BTU/ft<sup>3</sup> / LP-2500 BTU/ft<sup>3</sup>)

	NG	LPG
At 100% of Power Rating: ft <sup>3</sup> /hr (m <sup>3</sup> /hr)	1,177 (33.3)	520 (14.7)
At 75% of Power Rating: ft <sup>3</sup> /hr (m <sup>3</sup> /hr)	890 (25.2)	394 (11.1)
At 50% of Power Rating: ft <sup>3</sup> /hr (m <sup>3</sup> /hr)	621 (17.6)	275 (7.8)

### // Cooling - Radiator System

Ambient Capacity of Radiator: °F (°C)	122 (50)
Max. Restriction of Cooling Air, Intake, and Discharge Side of Rad.: in. H <sub>2</sub> O (kPa)	0.5 (0.12)
Water Pump Capacity: gpm (lit/min)	37 (140.1)
Heat Rejection to Coolant: BTUM (kW)	4,141 (72.8)
Heat Radiated to Ambient: BTUM (kW)	3,752 (66)

### // Air Requirements

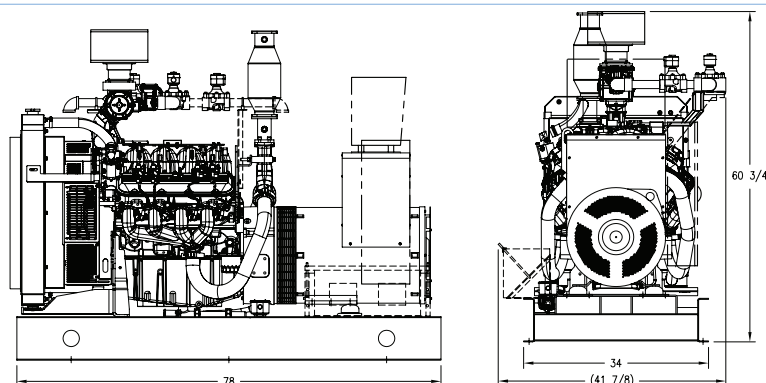
Aspirating: *SCFM (m <sup>3</sup> /min)	258.3 (7.3)
Air Flow Required for Rad.	
Cooled Unit: *SCFM (m <sup>3</sup> /min)	10,030 (284)
Air Flow Required for Heat Exchanger/Remote Rad. based on 25°F Rise: *SCFM (m <sup>3</sup> /min)	8,462.7 (239.6)

\* Air density = 0.0739 lbm/ft<sup>3</sup> (1.184 kg/m<sup>3</sup>)

### // Exhaust System

Gas Temp. (Stack): °F (°C)	1,300 (704.4)
Gas Volume at Stack Temp: CFM (m <sup>3</sup> /min)	834 (23.6)
Maximum Allowable Back Pressure: in. H <sub>2</sub> O (kPa)	40 (10)

## WEIGHTS AND DIMENSIONS



Drawing above for illustration purposes only, based on standard open power 480 volt generator. Lengths may vary with other voltages. Do not use for installation design.

System	Dimensions (L x W x H)	Weight (dry)
OPU	78 x 34 x 60.75 in (1,981 x 864 x 1,543 mm)	2,150 lb (976 kg)

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

Unit Type	Standby Full Load	Standby No Load
OPU (dBA)	C/F	C/F
WPE - No Sound Attenuation (dBA)	C/F	C/F
CQE (dBA)	C/F	C/F

Measurements for sound data are taken at 23 ft (7m).

## EMISSIONS DATA

Fuel Type	THC + NO <sub>x</sub>	CO
Natural Gas	0.23	0.31
Liquid Propane	0.134	0.79

**All units are in g/hp-hr.**

**Engine meets 40 CFR Part 60/1048 specifications.**

## RATING DEFINITIONS AND CONDITIONS

- // Ambient capability factor at 984 ft (300 m). Consult your local MTU Onsite Energy Power Generation Distributor for other altitudes.
- // 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, AS 2789, and DIN 6271.
- // Deration Factor:
  - Altitude:** 3% per 1,000 ft (305 m) above 328 ft (100 m).
  - Temperature:** 1% per 10°F (5.5°C) above 77°F (25°C).

Materials and specifications subject to change without notice.