

GAS ENGINE-GENERATOR SET

50-GC6NLT1

50 kWe / 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	188	188	173	150	75	60
Natural Gas						
Ratings: kW/kVA	45/45	45/45	50/62.5	50/62.5	50/62.5	50/62.5
LP Gas						
Ratings: Amps	208	208	173	150	75	60
LP Gas						
Ratings: kW/kVA	50/50	50/50	50/62.5	50/62.5	50/62.5	50/62.5
skVA@30%						
Voltage Dip	127	118	148	148	197	138
Generator Model*	362CSL1606	361CSL1612	361CSL1602	361CSL1602	361CSL1602	361PSL1633
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

STANDARD FEATURES

- // Engine-Generator Set Tested to ISO 8528-5 for Transient Response
- // UL2200, CSA Listing Offered
- // Accepts Rated Load in One Step Per NFPA 110
- // All engine-generator sets are prototype and factory tested
- // MTU Onsite Energy is a single source supplier
- // Global Product Support
- // 2 Year Standard Warranty
- // 5.0 L Engine
 - 5.0 Liter Displacement
 - 4-Cycle
- // Integral Vibration Isolators
- // Complete Range of Accessories
- // Permanent Magnet Generator (PMG)
 - Brushless, Rotating Field
 - 300% Short Circuit Capability
 - 2/3 Pitch Windings
 - Standard for 570 frame and larger
 - Optional for 430 frame and smaller
- // Digital Control Panel(s)
 - UL Recognized, cULus, NFPA 110
 - Complete System Metering
 - LCD Display
- // Cooling System
 - Integral Set-Mounted
 - Engine Driven Fan

STANDARD EQUIPMENT


// 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,  CE Approved
 Event Recording
 IP 54 Front Panel Rating with Integrated Gasket
 NFPA110 Level Compatible

APPLICATION DATA

// Engine

Manufacturer	GM
Model	5.0L
Type	4-Cycle
Arrangement	8-V
Displacement: L (in ³)	5 (305)
Bore: cm (in)	9.5 (3.75)
Stroke: cm (in)	8.8 (3.48)
Compression Ratio	9.4:1
Rated RPM	1,800
Engine Governor	Bosch
Maximum Power: Standby: kWm (bhp)	65.9 (88.3)
Speed Regulation	±1%
Air Cleaner	Dry

// Liquid Capacity (Lubrication)

Total Oil System: L (gal)	4.9 (1.3)
Engine Jacket Water Capacity: L (gal)	8.7 (2.3)
System Coolant Capacity: L (gal)	22.7 (6)

// Electrical

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

// 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: m ³ /hr (ft ³ /hr)	17 (600)	7.5 (265)
At 75% of Power Rating: m ³ /hr (ft ³ /hr)	12.8 (452)	5.7 (200)
At 50% of Power Rating: m ³ /hr (ft ³ /hr)	9 (317)	4 (140)

// Cooling - Radiator System

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)	113.6 (30)
Heat Rejection to Coolant: kW (BTUM)	59.8 (3,400)
Heat Radiated to Ambient: kW (BTUM)	8.2 (466)

// Air Requirements

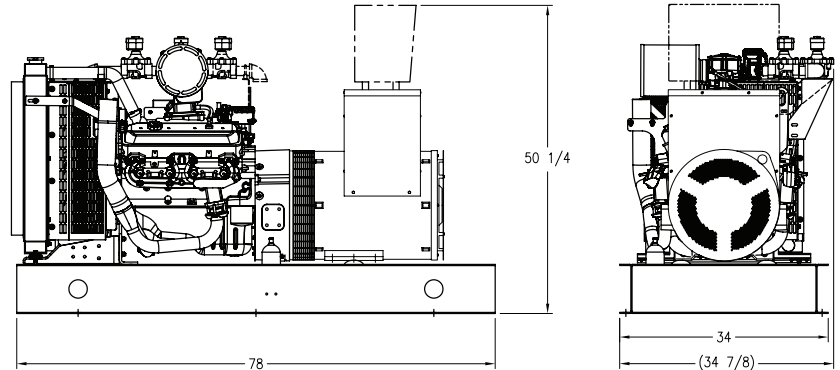
Aspirating: *m ³ /min (SCFM)	4.5 (158.9)
Air Flow Required for Rad.	
Cooled Unit: *m ³ /min (SCFM)	209.4 (7,396)
Air Flow Required for Heat Exchanger/Remote Rad. based on 25°F Rise: *m ³ /min (SCFM)	29.8 (1,051)

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

// Exhaust System

Gas Temp. (Stack): °C (°F)	704.4 (1,300)
Gas Volume at Stack Temp: m ³ /min (CFM)	14.5 (513)
Maximum Allowable Back Pressure: kPa (in. H ₂ O)	10 (40)

WEIGHTS AND DIMENSIONS



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

System	Dimensions (L x W x H)	Weight (dry)
OPU	1,981 x 864 x 1,276 mm (78 x 34 x 50.25 in)	658 kg (1,450 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 engine-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

Sound data is provided at 7m (23 ft).

EMISSIONS DATA

Fuel Type	THC + NO _x	CO
Natural Gas	10.34	42.3
Liquid Propane	11.63	53.17

All units are in g/hp-hr.

Engine meets EPA 40 CFR Part 60/90 specifications.

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, AS 2789, and DIN 6271.

// Deration Factor:

Altitude: 3% per 305 m (1,000 ft) above 100 m (328 ft). Consult your local MTU Onsite Energy Power Generation Distributor for other altitudes.

Temperature: 1% per 5.5°C (10°F) above 25°C (77°F).

Materials and specifications subject to change without notice.

C/F = Consult Factory/MTU Onsite Energy Distributor