

# GAS GENERATOR SET

## MTU 10V0068 GS100

100 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	1	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60	60
Natural Gas						
Ratings: Amps	417	417	347	301	151	120
Natural Gas						
Ratings: kW/kVA	100/100	100/100	100/125	100/125	100/125	100/125
LP Gas						
Ratings: Amps	417	417	347	301	151	120
LP Gas						
Ratings: kW/kVA	100/100	100/100	100/125	100/125	100/125	100/125
skVA@30%						
Voltage Dip	311	130	258	258	344	277
Generator Model	363CSL1617	431CSL6204	362CSL1606	362CSL1606	362CSL1606	362PSL1636
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**

// **Seismic Certification – Optional**

- IBC Certification
- OSHPD Pre-Approval

// **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

// **Power Rating**

- Accepts Rated Load in One Step Per NFPA 110

## 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(s)
  - UL Recognized, CSA Certified, NFPA 110
  - Complete System Metering
  - LCD Display
- // Cooling System
  - Integral Set-Mounted
  - Engine-Driven Fan

## STANDARD EQUIPMENT\*

### // Engine

Heavy Duty Air Cleaner  
 Oil Pump  
 Oil Drain Extension and S/O Valve  
 Full Flow Oil Filter  
 Jacket Water Pump  
 Thermostat  
 Blower Fan and Fan Drive  
 Radiator - Unit Mounted  
 Electric Starting Motor - 12V  
 Governor - Electronic Isochronous  
 Base - Formed Steel  
 SAE Flywheel and Bell Housing  
 Charging Alternator - 12V  
 Battery Rack and 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  
 $\pm 1\%$  Voltage Regulation No Load to Full Load

Brushless Alternator with Brushless Pilot Exciter  
 4 Pole, Rotating Field  
 130 °C Max. 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% Max. 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  
 NFPA110 Compatible

\* 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
Arrangement	10-V
Displacement: L (in <sup>3</sup> )	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
Max. Power (NG): kWm (bhp)	132 (177)
Max. Power (LP): kWm (bhp)	132 (177)
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 (1.6)
System Coolant Capacity: L (gal)	27.47 (7.25)

## // Electrical

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

## // Fuel Inlet - Vaporous Supply

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

## // Fuel Inlet - Liquid Supply

Fuel Supply Connection Size	#6 (3/8") Female SAE 45° Flare
Max. Fuel Supply Pressure: kPa (PSI)	2,150 (312)

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

	NG	LPG
At 100% of Power Rating: m <sup>3</sup> /hr (ft <sup>3</sup> /hr)	31.15 (1,100)	14.49 (511.5)
At 75% of Power Rating: m <sup>3</sup> /hr (ft <sup>3</sup> /hr)	23.67 (835.9)	11.32 (400)
At 50% of Power Rating: m <sup>3</sup> /hr (ft <sup>3</sup> /hr)	16.2 (520.1)	8.07 (284.8)

## // Cooling - Radiator System

	NG and LPG
Ambient Capacity of Radiator: °C (°F)	50 (122)
Max. Restriction of Cooling Air: Intake and Discharge Side of Rad.: kPa (in. H <sub>2</sub> O)	0.12 (0.5)
Water Pump Capacity: L/min (gpm)	123 (32.5)
Heat Rejection to Coolant: kW (BTUM)	81.29 (4,623)
Heat Radiated to Ambient: kW (BTUM)	41.54 (2,362)
Fan Power: kW (hp)	4.1 (5.5)

## // Air Requirements

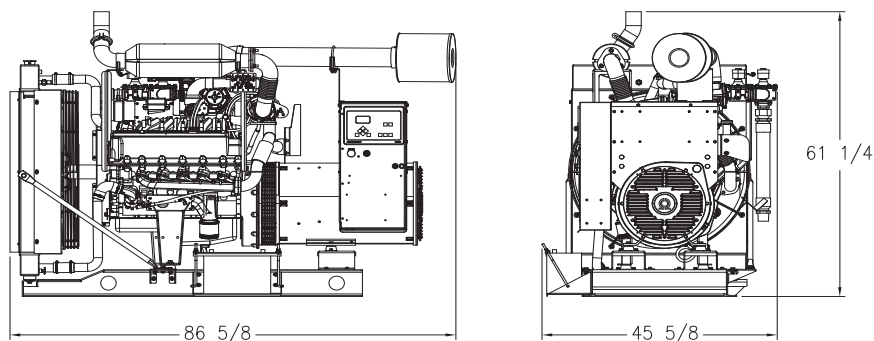
	NG and LPG
Aspirating: *m <sup>3</sup> /min (SCFM)	5.91 (208.7)
Air Flow Required for Rad. Cooled Unit: *m <sup>3</sup> /min (SCFM)	254.9 (9,001.7)
Remote Cooled Applications; Air Flow Required for Dissipation of Radiated Generator Set Heat For a Max. of 25 °F Rise: *m <sup>3</sup> /min (SCFM)	150.9 (5,329)

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

## // Exhaust System

	NG and LPG
Gas Temp. (Stack): °C (°F)	716.1 (1,321)
Gas Volume at Stack Temp: m <sup>3</sup> /min (CFM)	20.2 (713.4)
Max. Allowable Back Pressure: kPa (in. H <sub>2</sub> O)	6.23 (25)

## WEIGHTS AND DIMENSIONS



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.

System	Dimensions (LxWxH)	Weight (dry)
Open Power Unit (OPU)	2,199 x 1,158 x 1,556 mm (86.6 x 45.6 x 61.25 in)	1,163.9 kg (2,566 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

Unit Type	Standby Full Load (NG)	Standby Full Load (LP)
Level 0: Open Power Unit dB(A)	77.2	77.3

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 Type	THC + NO <sub>x</sub>	CO
Natural Gas	0.44	0.2
Liquid Propane	0.12	0.09

**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: ≤ 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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