# GAS GENERATOR SET
# MTU 8V0078 GS60

## 60 kWe / 60 Hz / Standby
## 208 - 600V

## SYSTEM RATINGS

**Standby**

| Voltage (L-L) | 240V* | 240V* | 208V* | 240V* | 380V* | 480V* | 600V* |
|---|---|---|---|---|---|---|---|
| Phase | 1 | 1 | 3 | 3 | 3 | 3 | 3 |
| PF | 1 | 1 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Hz | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| **Natural Gas (NG)** | | | | | | | |
| Ratings: Amps | 250 | 250 | 208 | 180 | 114 | 90 | 72 |
| Ratings: kW/kVA | 60/60 | 60/60 | 60/75 | 60/75 | 60/75 | 60/75 | 60/75 |
| skVA@30% | | | | | | | |
| Voltage Dip | 133 | 233 | 200 | 200 | 187 | 266 | 201 |
| Generator Model | 362CSL1606 | 362CSL1615 | 361CSL1602 | 361CSL1602 | 362CSL1604 | 361CSL1602 | 361PSL1634 |
| **Liquid Propane (LP)** | | | | | | | |
| Ratings: Amps | 250 | 250 | 208 | 180 | 114 | 90 | 72 |
| Ratings: kW/kVA | 60/60 | 60/60 | 60/75 | 60/75 | 60/75 | 60/75 | 60/75 |
| skVA@30% | | | | | | | |
| Voltage Dip | 119 | 130 | 200 | 200 | 177 | 172 | 138 |
| Generator Model | 362CSL1604 | 361PSL1613 | 361CSL1602 | 361CSL1602 | 361CSL1602 | 361CSL1601 | 361PSL1633 |
| **NG and LP** | | | | | | | |
| 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 | 130 °C/40 °C |
| Connection | 12 LEAD DOUBLE DELTA | 4 LEAD | 12 LEAD WYE | 12 LEAD DELTA | 12 LEAD WYE | 12 LEAD WYE | 4 LEAD WYE |

* UL 2200 Offered

## 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
// 6.2L Engine
- 6.2 Liter Displacement
- 4-Cycle
// 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 with Optional Permanent Magnet Generator (PMG)
// 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

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
Industrial Flywheel and Bell Housing
Charging Alternator - 12V
Battery Box and Cables
Flexible Fuel Connectors
Flexible Exhaust Connection
EPA Certified Engine

### // Generator

NEMA MG1, IEEE and ANSI standards compliance for temperature rise and motor starting
Self-Ventilated and Drip-Proof
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 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 | MTU |
| Model | 6.2L |
| Type | 4-Cycle |
| Arrangement | 8-V |
| Displacement: L ($in^3$) | 6.2 (379) |
| Bore: cm (in) | 102 (4.02) |
| Stroke: cm (in) | 95 (3.74) |
| Compression Ratio | 9.8:1 |
| Rated RPM | 1,800 |
| Engine Governor | MTU |
| Max. Power (NG): kWm (bhp) | 70 (95) |
| Max. Power (LP): kWm (bhp) | 78 (105) |
| Speed Regulation | ±0.75% |
| Air Cleaner | Dry |

## // Liquid Capacity (Lubrication)

| | |
|---|---|
| Total Oil System: L (gal) | 6.62 (1.75) |
| System Coolant Capacity: L (gal) | 28.5 (7.52) |

## // 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 $H_20$ (in. $H_20$) | 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/$ft^3$ / LP-2500 BTU/$ft^3$)

| | NG | LPG |
|---|---|---|
| At 100% of Power Rating: $m^3$/hr ($ft^3$/hr) | 21.50 (759) | 8.79 (311) |
| At 75% of Power Rating: $m^3$/hr ($ft^3$/hr) | 17.04 (602) | 6.99 (247) |
| At 50% of Power Rating: $m^3$/hr ($ft^3$/hr) | 12.58 (444) | 5.19 (183) |

* Based on 480 Volt generator at 130 °C temp rise.

## // 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. $H_20$) | 0.12 (0.5) |
| Water Pump Capacity: L/min (gpm) | 132.5 (35) |
| Heat Rejection to Coolant: kW (BTUM) | 77 (4,379) |
| Heat Radiated to Ambient: kW (BTUM) | 19.2 (1,092) |
| Fan Power: kW (hp) | 3.21 (4.3) |

## // Air Requirements

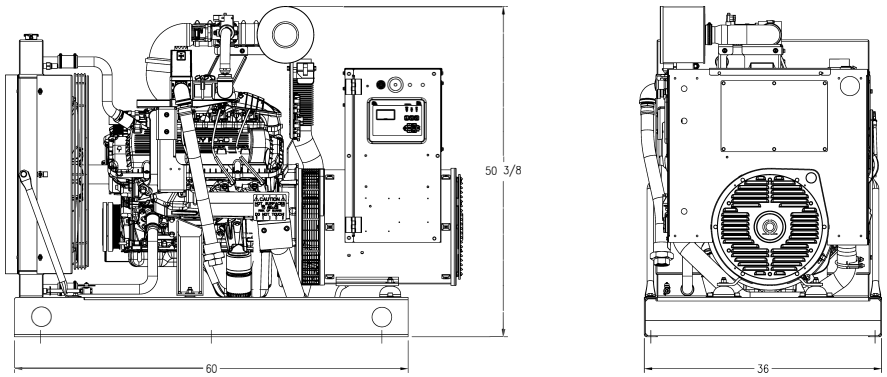
| | NG and LPG |
|---|---|
| Aspirating: *$m^3$/min (SCFM) | 4.7 (167.5) |
| Air Flow Required for Rad. Cooled Unit: *$m^3$/min (SCFM) | 259 (9,154) |
| Remote Cooled Applications; Air Flow Required for Dissipation of Radiated Generator Set Heat For a Max. of 25 °F Rise: *$m^3$/min (SCFM) | 104.8 (3,700) |

* Air density = 1.184 kg/$m^3$ (0.0739 lbm/$ft^3$)

## // Exhaust System

| | NG and LPG |
|---|---|
| Gas Temp. (Stack): °C (°F) | 629 (1,164) |
| Gas Volume at Stack Temp: $m^3$/min (CFM) | 14.4 (510.17) |
| Max. Allowable Back Pressure: kPa (in. $H_20$) | 10 (40) |

## 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 (L x W x H) | Weight Range (dry) |
|---|---|---|
| Open Power Unit (OPU) | 1,524 x 914 x 1,280 mm (60 x 36 x 50.4 in) | 840-1,090 kg (1,850-2,400 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 |
|---|---|
| Level 0: Open Power Unit dB(A) | 76 |

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 + $NO_x$ | CO |
|---|---|---|
| Natural Gas | 7.50 | 18.85 |
| Liquid Propane | 8.64 | 23.19 |

**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