Gas Generator Set

# MTU 8V0183 GS260

## 260 kWe/60 Hz/Standby/208 - 600V
## Reference MTU 8V0183 GS260 (235 kWe) for Prime Rating Technical Data

### System ratings

| Voltage (L-L) | 240V † | 208V † | 240V † | 480V † | 600V |
|---|---|---|---|---|---|
| Phase | 1 | 3 | 3 | 3 | 3 |
| PF | 1 | 0.8 | 0.8 | 0.8 | 0.8 |
| Hz | 60 | 60 | 60 | 60 | 60 |
| **Natural Gas (NG)** | | | | | |
| Amps | 1,063 | 902 | 782 | 391 | 313 |
| kW/kVA | 255/255 | 260/325 | 260/325 | 260/325 | 260/325 |
| **Liquid Propane (LP)** | | | | | |
| Amps | 625 | 555 | 481 | 241 | 192 |
| kW/kVA | 150/150 | 160/200 | 160/200 | 160/200 | 160/200 |
| **NG and LP** | | | | | |
| skVA@30% voltage dip | 520 | 608 | 608 | 809 | 740 |
| Generator model | 572RSL4031 | 432PSL6210 | 432PSL6210 | 432PSL6210 | 432PSL6246 |
| Temp rise | 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 | 12 LEAD LOW WYE | 12 LEAD HI DELTA | 12 LEAD HI 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
- UL 2200 - optional (refer to *System ratings* for availability)
- CSA - optional
  - CSA C22.2 No. 100
  - CSA C22.2 No. 14
- 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

A Rolls-Royce solution

## Standard features*

- MTU is a single source supplier
- Global product support
- 2 year standard warranty
- 14.6L turbo engine charge air cooling
  - 14.6 liter displacement
  - 4-cycle
- 3-way catalyst
- Optional fuel System:  NG and LP vapor dual fuel
- Engine-generator resilient mounted
- Complete range of accessories
- Cooling system
  - Integral set-mounted
  - Engine-driven fan
- Generator
  - Brushless, rotating field generator
  - 2/3 pitch windings
  - 300% short circuit capability with Permanent Magnet Generator (PMG)
    - ◊ PMG standard for 570 frame and larger
    - ◊ PMG optional for 430 frame and smaller
- Digital control panel(s)
  - UL recognized, CSA certified, NFPA 110
  - Complete system metering
  - LCD display

## Standard equipment*

### Engine

- Air cleaner
- Oil pump
- Oil drain extension and S/O valve
- Full flow oil filter
- Jacket water pump
- Thermostats
- Blower fan and fan drive
- Radiator - unit mounted
- Electric starting motor - 24V
- Governor – electronic isochronous
- Base - formed steel
- SAE flywheel and bell housing
- Charging alternator - 24V
- 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
- Sustained short circuit current of up to 300% of the rated current for up to 10 seconds (with PMG only)
- Self-ventilated and drip-proof
- Superior voltage waveform
- Solid state, volts-per-hertz regulator (digital when PMG is standard)
- ±1% voltage regulation no load to full load
- 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

* Represents standard product only. Consult the factory/MTU Distributor for additional configurations.

# Application data

### Engine

| | |
|---|---|
| Manufacturer | PSI |
| Model | 14.6L CAC |
| Type | 4-cycle |
| Arrangement | 8-V |
| Displacement: L (in³) | 14.6 (892) |
| Bore: cm (in) | 12.8 (5.04) |
| Stroke: cm (in) | 14.2 (5.59) |
| Compression ratio | 10.5:1 |
| Rated RPM | 1,800 |
| Engine governor | Bosch |
| Maximum power (NG): kWm (bhp) | 300 (402) |
| Maximum power (LP): kWm (bhp) | 189 (253) |
| Speed regulation | ± 0.5% |
| Air cleaner | dry |

### Liquid capacity (Lubrication)

| | |
|---|---|
| Total oil system: L (gal) | 38.1 (10.1) |
| Engine jacket water capacity: L (gal) | 43.2 (9.5) |
| System coolant capacity: L (gal) | 227 (50) |

### Electrical

| | |
|---|---|
| Electric volts DC | 24 |
| Cold cranking amps under -17.8 °C (0 °F) | 1,050 |

### Fuel inlet

| | |
|---|---|
| Fuel supply connection size | 2” NPT |
| Fuel supply pressure: mm $H_20$ (in. $H_20$) | 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) | 85 (3,000) | 24.3 (858) |
| At 75% of power rating: m³/hr (ft³/hr) | 64.6 (2,280) | 17.9 (633) |
| At 50% of power rating: m³/hr (ft³/hr) | 44.7 (1,580) | 13.3 (468) |

### Cooling - radiator system

| | NG and LPG |
|---|---|
| Ambient capacity of radiator: °C (°F) | 50 (122)* |
| Maximum restriction of cooling air, intake, and discharge side of radiator: kPa (in. $H_20$) | 0.12 (0.5) |
| Water pump capacity: L/min (gpm) | 680 (180) |
| Heat rejection to coolant: kW (BTUM) | 285 (16,189) |
| Heat radiated to ambient: kW (BTUM) | 80.5 (4,580) |
| Fan power: kW (hp) | 16.4 (22) |

* Installation of enclosures reduces the ambient capacity of the cooling system by 1 °C (1.8 °F). Gravity exhaust louvers reduce ambient capacity of the cooling system by an additional 3 °C (5.5 °F).

### Air requirements

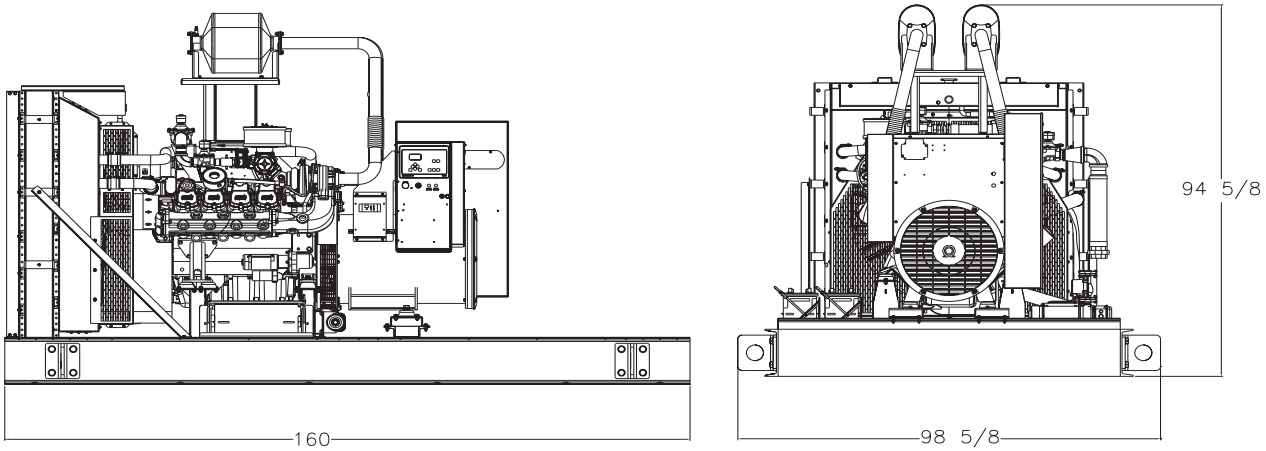
| | NG and LPG |
|---|---|
| Aspirating: *m³/min (SCFM) | 15.6 (532) |
| Air flow required for radiator Cooled unit: **m³/min (SCFM) | 849 (30,000) |
| Remote cooled applications; air flow required for dissipation of radiated generator set heat for a maximum of 25 °F rise: *m³/min (SCFM) | 293 (10,330) |

* Air density = 1.184 kg/m³ (0.0739 lbm/ft³)
** At 0.25 kPa (1 in. $H_20$) static pressure and 52 °C (125 °F) at radiator

### Exhaust system

| | NG and LPG |
|---|---|
| Gas temp. (stack): °C (°F) | 554 (1,030) |
| Gas volume at stack temp: m³/min (CFM) | 44.2 (1,560) |
| Maximum allowable back pressure at outlet of engine, before piping: kPa (in. $H_20$) | 2.5 (10.25) |

## 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 (L x W x H) | Weight (dry) |
|---|---|---|
| Open power unit (OPU) | 4,064 x 2,506 x 2,404 mm (160 x 98.6 x 94.6 in) | 4,055 kg (8,939 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:<br>Open power unit: dB(A) | 83.1 | 83 |

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 | 0.22 | 0.06 |
| Liquid propane | 0.07 | 0.11 |

- 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

- Ambient capability factor at 984 ft (300 m). Consult your local MTU 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, and AS 2789. Average load factor: ≤ 85%.
- Consult your local MTU Distributor for derating information.

Subject to change. | 23574 | 2021-04