Gas Generator Set

MTU 6R0185 GS200

200 kWe/60 Hz/Standby/208 - 600V
Reference MTU 6R0185 GS200 (175 kWe) for Prime Rating Technical Data

System ratings

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 (NG)						
Amps	750	750	694	601	300	240
kW/kVA	180/180	180/180	200/250	200/250	200/250	200/250
Liquid Propane (LP)						
Amps	541	541	451	390	195	156
kW/kVA	130/130	130/130	130/162	130/162	130/162	130/162
NG and LP						
skVA@30% voltage dip	425	370	608	608	809	720
Generator model *	433CSL6216	432PSL6228	432CSL6210	432CSL6210	432CSL6210	432PSL6246
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	12 LEAD DOUBLE DELTA	4 LEAD	12 LEAD LOW WYE	12 LEAD HI DELTA	12 LEAD HI WYE	4 LEAD WYE

* Consult the factory for alternate configuration.

† 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
- 11.1L turbo engine charge air cooling
  - 11.1 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 optional Permanent Magnet Generator (PMG)
- 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
- 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 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	11.1L CAC
Type	4-cycle
Arrangement	6-inline
Displacement: L (in^3)	11.1 (673)
Bore: cm (in)	12.3 (4.84)
Stroke: cm (in)	15.5 (6.1)
Compression ratio	10.5:1
Rated rpm	1,800
Engine governor	Bosch
Maximum power (NG): kWm (bhp)	225 (302)
Maximum power (LP): kWm (bhp)	155 (208)
Speed regulation	± 0.5%
Air cleaner	dry

Liquid capacity (Lubrication)

Total oil system: L (gal)	28.5 (8)
Engine jacket water capacity: L (gal)	25 (5.5)
System coolant capacity: L (gal)	149 (32.8)

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_2O (in. H_2O)	178–279 (7–11)

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)	59.9 (2,115)	19.9 (704)
At 75% of power rating: m^3/hr (ft^3/hr)	46.7 (1,648)	17 (600)
At 50% of power rating: m^3/hr (ft^3/hr)	32.8 (1,157)	11.5 (404)

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_2O)	0.12 (0.5)
Water pump capacity: L/min (gpm)	310 (82)
Heat rejection to coolant: kW (BTUM)	194.6 (11,071)
Heat radiated to ambient: kW (BTUM)	40.4 (2,295)
Fan power: kW (hp)	10.4 (13.9)

* 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

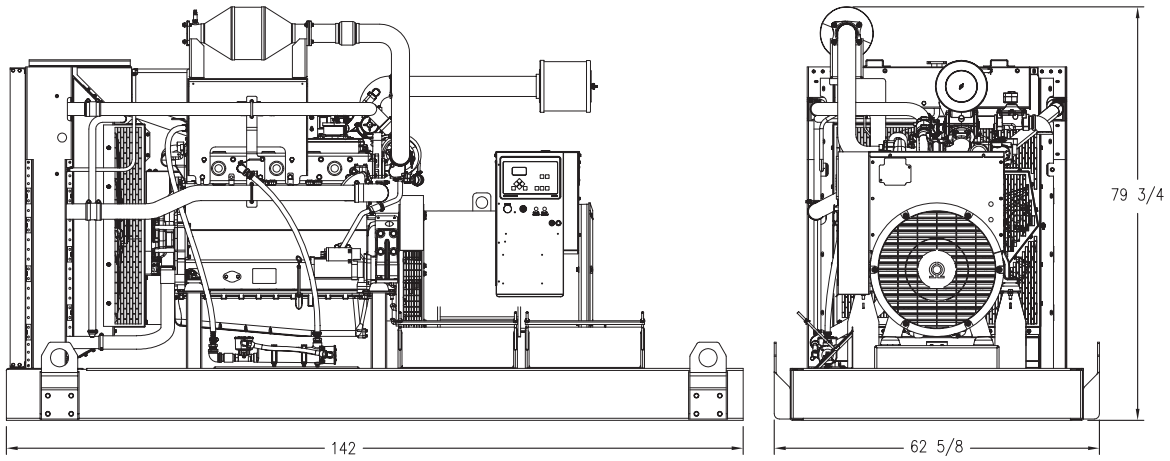
	NG and LPG
Aspirating: *m^3/min (SCFM)	11.7 (400)
Air flow required for radiator cooled unit: **m^3/min (SCFM)	631 (22,300)
Remote cooled applications; air flow required for dissipation of radiated generator set heat for a maximum of 25 °F rise: *m^3/min (SCFM)	237 (8,365)

* Air density = 1.184 kg/m^3 (0.0739 lbm/ft^3)
** At 0.25 kPa (1 in. H_2O) static pressure and 52 °C (125 °F) at radiator

Exhaust system

	NG and LPG
Gas temp. (stack): °C (°F)	694 (1,281)
Gas volume at stack temp: m^3/min (CFM)	38.8 (1,371)
Maximum allowable back pressure at outlet of engine, before piping: kPa (in. H_2O)	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)	3,607 x 1,591 x 2,026 mm (142 x 62.6 x 79.8 in)	3,096 kg (6,258 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)	86.3	86.1

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	2.25	0.26
Liquid propane	0.08	0.25

- 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. | 23470 | 2021-04