

# GAS GENERATOR SET

## MTU 10V0183 GS350

300 kW<sub>e</sub> / 60 Hz / Prime  
208 - 600V

Reference MTU 10V0183 GS350 (350 kW<sub>e</sub>) for Standby Rating Technical Data



### SYSTEM RATINGS

#### Prime

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 Ratings: Amps	1250	1041	902	451	361
Natural Gas Ratings: kW/kVA skVA@30%	300/300	300/375	300/375	300/375	300/375
Voltage Dip	700	959	959	1277	1100
Generator Model	573RSL4035	433CSL6220	433CSL6220	433CSL6220	433PSL6248
Temp Rise	105 °C/40 °C	105 °C/40 °C	105 °C/40 °C	105 °C/40 °C	105 °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 / 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
  - // 18.3 L Turbo Engine Charge Air Cooling
    - 18.3 Liter Displacement
    - 4-Cycle
  - // 3-Way Catalyst
  - // Engine-generator resilient mounted
  - // Complete Range of Accessories
- // Generator
    - Brushless, Rotating Field Generator
    - 2/3 Pitch Windings
    - 300% Short Circuit Capability with PMG
      - o PMG Standard for 570 frame and larger
      - o PMG Optional for 430 frame and smaller
  - // 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 & S/O Valve  
 Full Flow Oil Filter  
 Jacket Water Pump  
 Thermostats  
 Blower Fan & Fan Drive  
 Radiator - Unit Mounted  
 Electric Starting Motor - 24V  
 Governor - Electronic Isochronous  
 Base - Formed Steel  
 SAE Flywheel & Bell Housing  
 Charging Alternator - 24V  
 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 (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  
 105 °C Maximum Prime 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  
 NFPA110 Compatible

\* Represents standard product only. Consult Factory/MTU Onsite Energy Distributor for additional configurations.

## APPLICATION DATA

### // Engine

Manufacturer	Doosan
Model	18.3L CAC
Type	4-Cycle
Arrangement	10-V
Displacement: L (in <sup>3</sup> )	18.3 (1,115)
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)	340 (456)
Speed Regulation	±0.5%
Air Cleaner	Dry

### // Liquid Capacity (Lubrication)

Total Oil System: L (gal)	42.1 (11.1)
Engine Jacket Water Capacity: L (gal)	50 (11)
System Coolant Capacity: L (gal)	289 (63.5)

### // Electrical

Electric Volts DC	24
Cold Cranking Amps Under -17.8 °C (0 °F)	1,050

### // Fuel Inlet

Fuel Supply Connection Size	3" NPT
Fuel Supply Pressure: mm H <sub>2</sub> O (in. H <sub>2</sub> O)	178–279 (7–11)

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

At 100% of Power Rating: m <sup>3</sup> /hr (ft <sup>3</sup> /hr)	92 (3,247.5)
At 75% of Power Rating: m <sup>3</sup> /hr (ft <sup>3</sup> /hr)	71.5 (2,524.8)
At 50% of Power Rating: m <sup>3</sup> /hr (ft <sup>3</sup> /hr)	51.9 (1,831.7)

### // 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 <sub>2</sub> O)	0.12 (0.5)
Water Pump Capacity: L/min (gpm)	660 (174)
Heat Rejection to Coolant: kW (BTUM)	365 (20,784)
Heat Radiated to Ambient: kW (BTUM)	88.5 (5,030)
Fan Power: kW (hp)	20.9 (28)

\* 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

Aspirating: *m <sup>3</sup> /min (SCFM)	19.4 (664)
Air Flow Required for Rad.	
Cooled Unit: **m <sup>3</sup> /min (SCFM)	1,019 (36,000)
Remote Cooled Applications; Air Flow Required for Dissipation of Radiated Gen-set Heat for a Max of 25 °F Rise: *m <sup>3</sup> /min (SCFM)	321 (11,350)

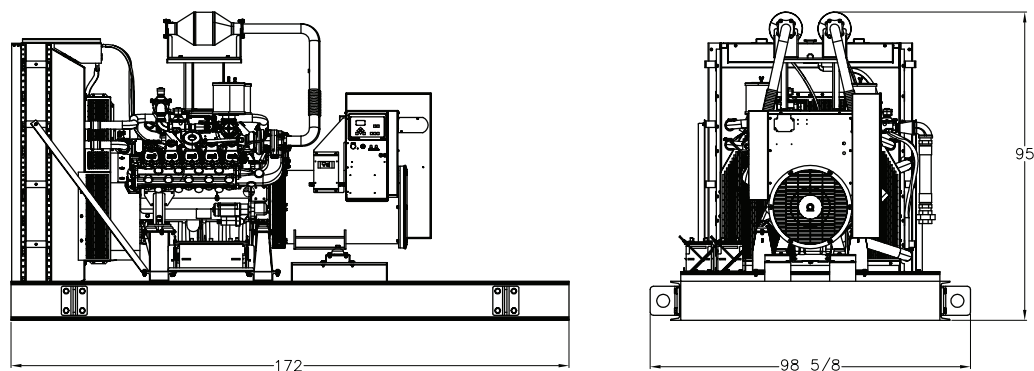
\* Air density = 1.184 kg/m<sup>3</sup> (0.0739 lbm/ft<sup>3</sup>)

\*\* At 0.25 kPa (1 in. H<sub>2</sub>O) static pressure and 52 °C (125 °F) at radiator

### // Exhaust System

Gas Temp. (Stack): °C (°F)	607 (1,125)
Gas Volume at Stack	
Temp: m <sup>3</sup> /min (CFM)	58.6 (2,070)
Maximum Allowable	
Back Pressure: kPa (in. H <sub>2</sub> O)	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

Open Power Unit (OPU)

### Dimensions (L x W x H)

4,369 x 2,506 x 2,413 mm (172 x 98.63 x 95 in)

### Weight (dry)

4,741 kg (10,452 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

Level 0: Open Power Unit dB(A)

### Prime Full Load (NG)

84.7

### Prime Full Load (LP)

C/F

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

Natural Gas

### THC + NO<sub>x</sub>

0.59

### CO

0.21

### 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 Onsite Energy Power Generation Distributor for other altitudes.
- // Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, ISO-3046/1, BS 5514, and AS 2789. Average load factor: ≤ 75%. For limited running time and base load ratings, consult the factory.
- // Deration Factor:  
Production tolerances in engines and installed components can account for power variations. Altitude, temperature and excessive exhaust and intake restrictions should be applied to power calculations. Consult your local MTU Onsite Energy Power Generation Distributor for 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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