SAVANTECH
The Source of Energy Generators
An Engineering and Technology Company

DIESEL GENERATOR SET
MTU 3R0096 DS30

30 kWe / 60 Hz / Standby
208 - 600V

Reference MTU 3R0096 DS30 (27 kWe) for Prime Rating Technical Data

mtu onsite energy

SYSTEM RATINGS

Standby

Voltage (L-L)	240V**	208V**	240V**	380V**	480V**	600V**
Phase	1	3	3	3	3	3
PF	1	0.8	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60	60
kW	30	30	30	30	30	30
kVA	30	37	37	37	37	37
Amps	125	104	90	57	45	36
skVA@30%						
Voltage Dip	65	142	142	187	187	142
Generator Model	285PSL1700	285PSL1700	285PSL1700	285PSL1700	285PSL1700	284PSL5252
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	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	12 LEAD WYE	4 LEAD WYE

** UL 2200 Offered

CERTIFICATIONS AND STANDARDS

// **Emissions**
– EPA Tier 3 Certified

// **Generator set is designed and manufactured in facilities certified to standards ISO 9001:2008 and ISO 14001:2004**

// **Seismic Certification – Optional**
– IBC Certification

// **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
// 3029TFG89 Diesel Engine
- 2.9 Liter Displacement
- 4-Cycle
// 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 Cleaners
Oil Pump
Oil Drain Extension and S/O Valve
Full Flow Oil Filter
Fuel Filter with Water Separator
Jacket Water Pump
Thermostat
Blower Fan and Fan Drive
Radiator - Unit Mounted
Electric Starting Motor - 12V
Governor – Mechanical Droop
Base - Formed Steel
SAE 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
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	John Deere
Model	3029TFG89
Type	4-Cycle
Arrangement	3-Inline
Displacement: L (in^3)	2.9 (177)
Bore: cm (in)	10.6 (4.2)
Stroke: cm (in)	11 (4.3)
Compression Ratio	17.2:1
Rated RPM	1,800
Engine Governor	Mechanical Droop
Max. Power: kWm (bhp)	35 (47)
Speed Regulation	±1%
Air Cleaner	Dry

// Liquid Capacity (Lubrication)

Total Oil System: L (gal)	8 (2.1)
Engine Jacket Water Capacity: L (gal)	5.7 (1.5)
System Coolant Capacity: L (gal)	11.4 (3)

// Electrical

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

// Fuel System

Fuel Supply Connection Size	5/16" ID/-6 JIC
Fuel Return Connection Size	5/16" ID/-6 JIC
Max. Fuel Lift: m (ft)	2 (6.6)
Recommended Fuel	Diesel #2
Total Fuel Flow: L/hr (gal/hr)	111.3 (29.4)

// Fuel Consumption

At 100% of Power Rating: L/hr (gal/hr)	9.9 (2.6)
At 75% of Power Rating: L/hr (gal/hr)	7.5 (2)
At 50% of Power Rating: L/hr (gal/hr)	5.2 (1.4)

// Cooling - Radiator System

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)	110 (29)
Heat Rejection to Coolant: kW (BTUM)	20.1 (1,144)
Heat Radiated to Ambient: kW (BTUM)	4.3 (245)
Fan Power: kW (hp)	0.7 (0.94)

*Installation of a gravity exhaust louver in a Level 3 enclosure will reduce the ambient capacity of the cooling system by 5 °C (9 °F).

// Air Requirements

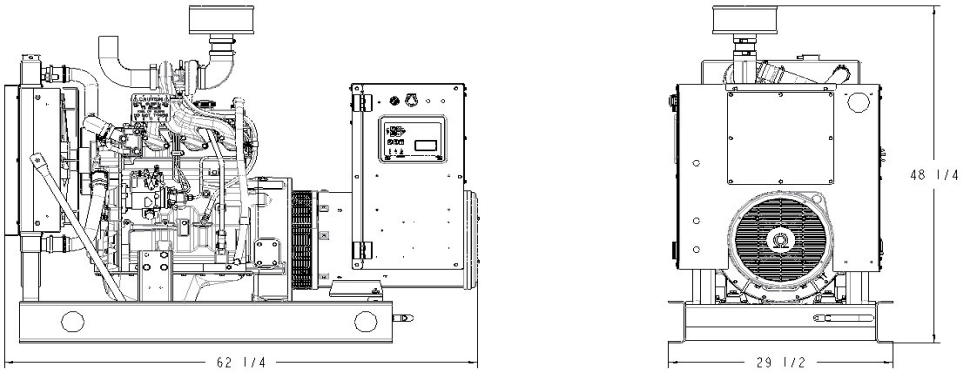
Aspirating: *m^3/min (SCFM)	3.6 (127)
Air Flow Required for Rad. Cooled Unit: *m^3/min (SCFM)	46.7 (1,636)
Remote Cooled Applications; Air Flow Required for Dissipation of Radiated Generator Set Heat for a Max. of 25 °F Rise: *m^3/min (SCFM)	15.8 (553)

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

// Exhaust System

Gas Temp. (Stack): °C (°F)	580 (1,076)
Gas Volume at Stack Temp: m^3/min (CFM)	8.3 (293)
Max. Allowable Back Pressure: kPa (in. H_20)	7.5 (30)

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/less tank)
Open Power Unit (OPU)	1,581 x 749 x 1,226 mm (62.25 x 29.5 x 48.25 in)	736-995 kg (1,623-2,194 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)	72.2

Sound data is provided at 7 m (23 ft). Generator set tested in accordance with ISO 8528-10 and with infinite exhaust.

EMISSIONS DATA

NO_x + NMHC	CO	PM
4.41	0.44	0.11

All units are in g/hp-hr and shown at 100% load (not comparable to 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. The weighted cycle value (not shown) from each engine is guaranteed to be within the US EPA Standards. 5-mode emission data per 40 CFR 89 or 40 CFR 1039 (as applicable) is available upon request.

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