

DIESEL GENERATOR SET

DS60D6S

60 kWe / 60 Hz / Standby
208 - 600V

(Reference DP55D6S for Prime Rating Technical Data)



SYSTEM RATINGS

| Standby | DS60D6SGA | DS60D6SDA | DS60D6SPA | DS60D6SJA | DS60D6SVA | DS60D6SRA | DS60D6SNA |
|---------------|-------------------------|--------------|--------------------|---------------------|-------------------|-------------------|--------------|
| Voltage (L-L) | 240V** | 240V** | 208V** | 240V** | 380V** | 480V** | 600V** |
| Phase | 1 | 1 | 3 | 3 | 3 | 3 | 3 |
| PF | 1.0 | 1.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Hz | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| kW | 60 | 61 | 63 | 63 | 60 | 60 | 60 |
| kVA | 60 | 61 | 78 | 78 | 75 | 75 | 75 |
| Amps | 250 | 254 | 218 | 189 | 114 | 90 | 72 |
| skVA@30% | | | | | | | |
| Voltage Dip | 119 | 130 | 200 | 200 | 266 | 173 | 136 |
| Generator | | | | | | | |
| Model* | 362CSL1604 | 361CSL1613 | 361CSL1602 | 361CSL1602 | 361CSL1602 | 361CSL1601 | 361PSL1633 |
| 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 LOW WYE | 12 LEAD HI DELTA | 12 LEAD HI WYE | 12 LEAD HI 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

// 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
 - // 4045HF280 Diesel Engine
 - 4.5 Liter Displacement
 - Mechanical Injection Pump
 - 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 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 & S/O Valve
 Full Flow Oil Filter
 Fuel Filter with Water Separator
 Jacket Water Pump
 Thermostat
 Blower Fan & Fan Drive
 Radiator - Unit Mounted
 Electric Starting Motor - 12V
 Governor - Mechanical Droop
 Base - Formed Steel
 SAE Flywheel & Bell Housing
 Charging Alternator - 12V
 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
 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
 Windows®-Based Software
 Multilingual Capability
 Remote Communications to RDP-110 Remote Annunciator
 Programmable Contact Inputs
 Programmable Contact Outputs
 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 | 4045HF280 |
| Type | 4-Cycle |
| Arrangement | 4-Inline |
| Displacement: L (in ³) | 4.5 (275) |
| Bore: cm (in) | 10.6 (4.19) |
| Stroke: cm (in) | 12.7 (5.0) |
| Compression Ratio | 19.0:1 |
| Rated RPM | 1,800 |
| Engine Governor | Mechanical Droop |
| Maximum Power: kWm (bhp) | 74 (99) |
| Speed Regulation | ±0.50% |
| Air Cleaner | Dry |

// Liquid Capacity (Lubrication)

| | |
|---------------------------------------|------------|
| Total Oil System: L (gal) | 13 (3.4) |
| Engine Jacket Water Capacity: L (gal) | 8.5 (2.3) |
| System Coolant Capacity: L (gal) | 16.7 (4.4) |

// Electrical

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

// Fuel System

| | |
|--------------------------------|------------|
| Fuel Supply Connection Size | 3/8" NPT |
| Fuel Return Connection Size | 3/8" NPT |
| Maximum Fuel Lift: m (ft) | 1.8 (6) |
| Recommended Fuel | Diesel #2 |
| Total Fuel Flow: L/hr (gal/hr) | 113 (29.9) |

// Fuel Consumption

| | |
|--|------------|
| | STANDBY |
| At 100% of Power Rating: L/hr (gal/hr) | 19.3 (5.1) |
| At 75% of Power Rating: L/hr (gal/hr) | 14.8 (3.9) |
| At 50% of Power Rating: L/hr (gal/hr) | 10.6 (2.8) |

// Cooling - Radiator System

| | |
|--|-------------|
| | STANDBY |
| Ambient Capacity of Radiator: °C (°F) | 50 (122) |
| Maximum Allowable Static | |
| Pressure on Rad. Exhaust: kPa (in. H ₂ O) | 0.12 (0.5) |
| Water Pump Capacity: L/min (gpm) | 144 (38) |
| Heat Rejection to Coolant: kW (BTUM) | 35 (1,979) |
| Heat Rejection to Air to Air: kW (BTUM) | 5 (278) |
| Heat Radiated to Ambient: kW (BTUM) | 10.9 (619) |
| Fan Power: kW (hp) | 1.16 (1.55) |

// Air Requirements

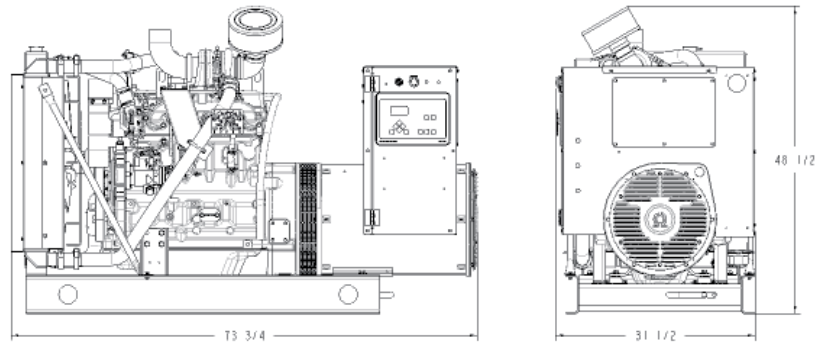
| | |
|--|------------|
| | STANDBY |
| Aspirating: *m ³ /min (SCFM) | 5.4 (191) |
| Air Flow Required for Rad. | |
| Cooled Unit: *m ³ /min (SCFM) | 91 (3,162) |
| Remote Cooled Applications; | |
| Air Flow Required for Dissipation | |
| of Radiated Gen-set Heat for a | |
| Max of 25 °F Rise: *m ³ /min (SCFM) | 40 (1,396) |

* Air density = 1.184 kg/m³ (0.0739 lbm/ft³)

// Exhaust System

| | |
|---|-------------|
| | STANDBY |
| Gas Temp. (Stack): °C (°F) | 545 (1,013) |
| Gas Volume at Stack | |
| Temp: m ³ /min (CFM) | 14.4 (508) |
| Maximum Allowable | |
| Back Pressure: kPa (in. H ₂ O) | 7.5 (30) |
| Minimum Allowable | |
| Back Pressure: kPa (in. H ₂ O) | N/A |

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) | 1,873 x 800 x 1,232 mm (73.75 x 31.50 x 48.50 in) | 964 kg (2,120 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) | 73 |

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 | HC | CO | PM |
|-----------------|------|-----|------|
| 3.2 | 0.17 | 0.7 | 0.22 |

All units are in g/hp-hr and are EPA D2 cycle values.

Emission levels of the engine may vary as a function of ambient temperature, barometric pressure, humidity, fuel type and quality, installation parameters, measuring instrumentation, etc. The data provided are laboratory results from one engine representing this rating. The data was obtained under controlled environmental conditions with calibrated instrumentation traceable to the United States National Bureau of Standards and in compliance with US EPA regulations found within 40 CFR Part 89. The weighted cycle value from each engine is guaranteed to be below the US EPA Standards at the US EPA defined conditions.

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, AS 2789, and DIN 6271.

// 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.

Materials and specifications subject to change without notice.

C/F = Consult Factory/MTU Onsite Energy Distributor

MTU Onsite Energy

A Rolls-Royce Power Systems Brand

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