# DIESEL ENGINE-GENERATOR SET 60-JS6DT3

60 ekW / 60 Hz / Standby 208 - 600V



# SYSTEM RATINGS

#### Standby

| Voltage (L-L)   | 240V**          | 208V**          | 240V**           | 480V**         | 600V**     |
|-----------------|-----------------|-----------------|------------------|----------------|------------|
| Phase           | 1               | 3               | 3                | 3              | 3          |
| PF              | 1.0             | 0.8             | 0.8              | 0.8            | 0.8        |
| Hz              | 60              | 60              | 60               | 60             | 60         |
| kW              | 60              | 60              | 60               | 60             | 60         |
| kVA             | 60              | 75              | 75               | 75             | 75         |
| AMPS            | 250             | 208             | 180              | 90             | 72         |
| skVA@30%        |                 |                 |                  |                |            |
| Voltage Dip     | 127             | 178             | 236              | 236            | 136        |
| Generator Model | 362PSL1604      | 362PSL1604      | 362PSL1604       | 362PSL1604     | 362PSL1633 |
| Temp Rise       | 130°C/27°C      | 130°C/27°C      | 130°C/27°C       | 130°C/27°C     | 125°C/40°C |
| Connection      | 12 LEAD ZIG-ZAG | 12 LEAD LOW WYE | 12 LEAD HI DELTA | 12 LEAD HI WYE | 4 LEAD WYE |
|                 |                 |                 |                  |                |            |

<sup>\*\*</sup> UL2200 Offered

#### **FACTS**

- // EPA Tier 3 Certified
- // Engine-Generator Set Tested to ISO 8528-5 for Transient Response
- // UL2200, CSA Listing Offered
- // Accepts Rated Load in One Step Per NFPA 110, Level 1
- // All engine-generator sets are prototype and factory tested
- // MTU Onsite Energy is a single source supplier
- // Global Product Support
- // 2 Year Standard Warranty
- // 5030HF285 Diesel Engine
  - 3.0 Liter Displacement
  - Electronic Unit Pump Injection
  - 4-Cycle

- // Complete Range of Accessories
- // Permanent Magnet Generator (PMG) Optional
  - Brushless, Rotating Field
  - 300% Short Circuit Capability
  - 2/3 Pitch Windings
- // Digital Control Panel(s)
  - UL Recognized, c NFPA 110
  - Complete System Metering
  - LCD Display
- // Cooling System
  - Integral Set-Mounted
  - Engine Driven Fan

## STANDARD EQUIPMENT

#### // Engine

Air Cleaner Oil Pump Full Flow Oil Filter Jacket Water Pump Closed Crankcase Vent Thermostat Exhaust Manifold - Dry Blower Fan & Fan Drive Radiator - Unit Mounted Electric Starting Motor - 12V Governor - Electric Isochronous 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

Sustained short circuit current of up to 300% of the rated current for up to 10 seconds

Self-Ventilated and Drip-Proof

Superior Voltage Waveform

Digital, Solid State, Volts-per-Hertz Regulator

No Load to Full Load Regulation

Brushless Alternator with Brushless Pilot Exciter

4 Pole, Rotating Field

130°C Standby Temperature Rise

1 Bearing, Sealed

Full Amortisseur Windings

125% Rotor Balancing

3-Phase Voltage Sensing

±1% Voltage Regulation

100% of Rated Load - One Step

3% Maximum Harmonic Content

#### // 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 our RDP-110 Remote Annunciator 16 Programmable Contact Inputs 7 Contact Outputs UL Recognized, c Wus, CE Approved **Event Recording** 

#### // Additional Features

NFPA110 Level Compatible

IP 54 Front Panel Rating with Integrated Gasket

Oil Drain Extension & S/O Valve Flexible Fuel Connector Battery Cables Vibration Isolation Pads Jacket Water Heater: -20° F Mainline Circuit Breaker UL2200 Listed Steel Sub-Base Radiator Duct Flange (OPU) Lube Oil & Antifreeze Operator's and Owner's Manual 2 Year/3000 Hour Warranty Factory Tested at 0.8 PF (3 PH)

### // Optional Features

Battery Charger: 6 Amp or 10 Amp Battery: 12 Volt w/ Rack

Circuit Breaker: Standard or 100%

Muffler (OPU only)

Sub-Base Fuel Tank w/ Electrical Stub-Up Area

Weatherproof Enclosure

Sound Attenuation

- 1 1/2" Foam

- Sound Scoops

Remote Annunciator

Isochronous Governor

# APPLICATION DATA

# // Engine

| Manufacturer                  | John Deere                             |
|-------------------------------|--|
| Model                         | 5030HF285                              |
| Туре                          | 4-Cycle                                |
| Arrangement                   | 5-Inline                               |
| Displacement: Cu In (lit)     | 186 (3.05)                             |
| Bore: in (cm)                 | 3.4 (8.6)                              |
| Stroke: in (cm)               | 4.1 (10.5)                             |
| Compression Ratio             | 18.2:1                                 |
| Rated RPM                     | 1,800                                  |
| Engine Governor               | JDEC                                   |
| Max Power: Standby: bhp (kWm) | 96 (72)                                |
| Regulation                    | ±.25%                                  |
| Frequency                     | 60 Hz                                  |
| Air Cleaner                   | Dry                                    |
|                               | ······································ |

# // Liquid Capacity (Lubrication)

| Total Oil System: gal (lit)             | 2.96 (11.2) |
|---|-------------|
| Engine Jacket Water Capacity: gal (lit) | 0.78 (2.9)  |
| System Coolant Capacity: gal (lit)      | 4.08 (15.4) |

#### // Electrical

| Electric Volts DC                      | 12  |
|--|-----|
| Cold Cranking Amps Under 0°F (-17.8°C) | 750 |

# // Fuel System

| Fuel Supply Connection Size      | 3/8" NPT  |
|----------------------------------|-----------|
| Fuel Return Connection Size      | 3/8" NPT  |
| Maximum Fuel Lift: ft (m)        | 10 (3)    |
| Recommended Fuel                 | Diesel #2 |
| Total Fuel Flow: gal/hr (lit/hr) | 21.7 (82) |

# // Fuel Consumption

| At 100% of Power Rating: gal/hr (lit/hr) | 5 (18.9)   |
|--|------------|
| At 75% of Power Rating: gal/hr( lit/hr)  | 3.8 (14.4) |
| At 50% of Power Rating: gal/hr (lit/hr)  | 2.5 (9.5)  |

# // Cooling - Radiator System

| Ambient Capacity of Radiator: °F (°C)                  | 122 (50)     |
|--|--------------|
| Max. Restriction of Cooling Air, Intake,               |              |
| and Discharge Side of Rad.: in. H <sub>2</sub> 0 (kPa) | 0.5 (0.12)   |
| Water Pump Capacity: gpm (lit/min)                     | 26 (100)     |
| Heat Rejection to Coolant: BTUM (kW)                   | 2,590 (45.5) |
| Heat Rejection to Air to Air: BTUM (kW)                | 723 (12.7)   |
| Heat Radiated to Ambient: BTUM (kW)                    | 554 (10)     |
|  |              |

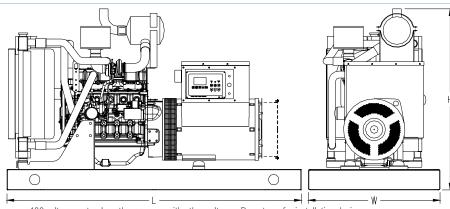
# // Air Requirements

| Aspirating: *SCFM (m³/min)   | 186 (5.3)   |
|------------------------------|-------------|
| Air Flow Required for Rad.   |             |
| Cooled Unit: *SCFM (m³/min)  | 5,765 (163) |
| Air Flow Required for Heat   |             |
| Exchanger/Remote Rad. based  |             |
| on 25°F Rise: *SCFM (m³/min) | 1,250 (36)  |

<sup>\*</sup> Air density =  $0.0739 \text{ lbm/ft}^3 (1.184 \text{ kg/m}^3)$ 

# // Exhaust System

| Gas Temp. (Stack): °F (°C)                | 972 (522)  |
|---|------------|
| Gas Volume at Stack                       |            |
| Temp: CFM (m³/min)                        | 484 (13.7) |
| Maximum Allowable                         |            |
| Back Pressure: in. H <sub>2</sub> 0 (kPa) | 30 (7.5)   |
| Minimum Allowable                         |            |
| Back Pressure: in. H <sub>2</sub> 0 (kPa) | 16 (4)     |



Drawing above for illustration purposes only, based on standard open power 480 volt generator. Lengths may vary with other voltages. Do not use for installation design.

| OPU<br>EPU | System |
|------------|--------|
| EPU        | OPU    |
|            | EPU    |

|  | <b>Dimensions</b> | (LxWxH) |
|--|-------------------|---------|
|--|-------------------|---------|

85 x 38 x 52 in (2,160 x 970 x 1,320 mm) 85 x 38 x 60 in (2,160 x 970 x 1,520 mm)

| Weight (less tank) |  |
|--------------------|--|
| 1,693 lb (768 kg)  |  |
| 2.032 lb (922 kg)  |  |

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

|   |   | _    |     |    |
|---|---|------|-----|----|
| U |   |      | m   | _  |
| w | ш | - A' | 7 9 | Θ. |

OPU w/ Critical Grade Muffler (dBA)
Sound Attenuated Enclosure (dBA)

Measurements for sound data are taken at 23 ft (7 m).

| Standby Full Load | Standby No Load |
|-------------------|-----------------|
| 86.5              | 81              |
| 78.5              | 73              |

## **EMISSIONS DATA**

| NO <sub>x</sub> + NMHC |  |
|------------------------|--|
| 3.48                   |  |
|                        |  |

| CO   |
|------|
| 0.68 |
|      |



#### 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

- // Ambient capability factor at 984 ft (300 m). Consult your local MTU Onsite Energy Power Generation 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, AS 2789, and DIN 6271.
- // Deration Factor:

**Altitude**: 0.5% per 1,000 ft (305 m) above sea level and 4% per 1,000 ft (305 m) above 10,000 ft (3,050 m). **Temperature**: 0.5% per 10°F (5.5°C) above 77°F (25°C). MTU Onsite Energy. Subject to alteration due to technological advances. 2009-05

Materials and specifications subject to change without notice.