

# DIESEL GENERATOR SET

## WATER CHARGE-AIR COOLING

1140kVA/50 Hz/Standby (Fuel-Optimized)  
380 - 415V



Optional equipment shown. Standard equipment may vary.

### BENEFITS

- // Low installation costs
- // Best fuel consumption values
- // Long maintenance intervals
- // Best-in-class reliability and availability
- // Lifting vertically or with diagonal pull
- // Compact design

### SYSTEM RATINGS<sup>①</sup>

| Standby         | DS01140D5S    | DS01140D5S    | DS01140D5S    |
|-----------------|---------------|---------------|---------------|
| Voltage (L-L)   | 380V          | 400V          | 415V          |
| Phase           | 3             | 3             | 3             |
| PF              | 0.8           | 0.8           | 0.8           |
| Hz              | 50            | 50            | 50            |
| kW              | 904           | 912           | 840           |
| kVA             | 1130          | 1140          | 1050          |
| Amps            | 1717          | 1645          | 1461          |
| Generator model | 575RSL7074    | 575RSL7074    | 575RSL7074    |
| Temp rise       | 150 °C/40 °C  | 150 °C/40 °C  | 150 °C/40 °C  |
| Connection      | 6 LEAD HI WYE | 6 LEAD HI WYE | 6 LEAD HI WYE |

<sup>①</sup> Power available up to 40°C/400 m

## CERTIFICATIONS AND STANDARDS

- // Engine-generator set is designed and manufactured in facilities certified to standards ISO 9001:2008 and ISO 14001:2004
- // Performance Assurance Certification (PAC)
  - Engine-generator set tested according to ISO 8528-5 for transient response
  - Verified product design, quality and performance integrity
  - All engine systems are type and factory tested
- // Power Rating
  - Permissible average power output during 24 hours of operation up to 85%

## STANDARD EQUIPMENT<sup>①</sup>

### // Engine

Air filters  
 Oil pump for draining  
 Full flow oil filters  
 Closed crankcase ventilation  
 Jacket water pump  
 Thermostats  
 Exhaust manifold – dry  
 Belt driven radiator fan  
 Radiator – unit mounted  
 Electric starting motor – 24V  
 Governor – electronic isochronous  
 Base – formed steel  
 SAE flywheel & bell housing  
 Charging alternator  
 Flexible fuel connectors  
 Flexible exhaust connection

### // Generator

NEMA MG1, IEEE and ANSI standards compliance for temperature rise and motor  
 VDE 0530, IEC 60034-1, BS4999, BS5000, CSA22.2-100, AS 1361  
 Sustained short circuit current of up to 250% of the rated current for up to 10 seconds  
 Self-ventilated and drip-proof IP23  
 Superior voltage waveform  
 Digital, volts-per-hertz regulator  
 No load to full load regulation  
 Brushless alternator with brushless pilot exciter  
 4 Pole, rotating field  
 150 °C maximum standby temperature rise  
 Heavy duty shielded ball bearings with a minimum B-10 life of 40,000 hrs  
 Flexible coupling  
 Full amortisseur windings  
 3-phase voltage sensing  
 ±0.25% voltage regulation  
 100% of rated load – one step according to NFPA 110  
 3% maximum harmonic content

<sup>①</sup> Represents standard product only. Consult Factory/MTU Onsite Energy distributor for additional configurations.

## STANDARD FEATURES<sup>①</sup>

- // The engine-generator set complies to G3
- // Engine generator set tested according to ISO 8528-5 for transient response
- // Accepts rated load in one step as per NFPA 110
- // All engine-generator sets are type and factory tested
- // MTU Onsite Energy is a single source supplier
- // Global product support
- // 16V2000 diesel engine (31,84 Liter (1943 cu inch) displacement; 4-stroke)
- // Engine-generator resiliently mounted
- // Complete range of accessories
- // Brushless, rotating field generator (PMG excitation; 250% short circuit capability; 2/3 pitch stator windings)
- // Complete system metering
- // LCD display

## APPLICATION DATA

### // Engine

|                           |                        |
|---------------------------|------------------------|
| Manufacturer              | MTU                    |
| Model                     | 16V2000G65TB           |
| Type                      | 4-Stroke               |
| Arrangement               | 16-V                   |
| Displacement: L (cu inch) | 1.99 (121)             |
| Bore: mm (inch)           | 130 (5.1)              |
| Stroke: mm (inch)         | 150 (5.9)              |
| Compression ratio         | 16:1                   |
| Rated speed rpm           | 1500                   |
| Engine Governor           | Electronic isochronous |
| Max power: kWm (bhp)      | 975 (1307)             |
| Speed regulation          | ±0.25%                 |
| Air filter                | Dry                    |

### // Lube Oil Capacity

|                           |          |
|---------------------------|----------|
| Total oil system: l (gal) | 102 (27) |
|---------------------------|----------|

### // Electrical

|                                          |      |
|------------------------------------------|------|
| Electric Volts DC                        | 24   |
| Cold cranking amps under -17.8 °C (0 °F) | 1000 |

### // Fuel System

|                                |                                    |
|--------------------------------|------------------------------------|
| Fuel supply connection size    | M22x1,5 - 60°/Male                 |
| Fuel return connection size    | M12x1,5 - 60°/Male                 |
| Maximum fuel lift: m (ft)      | 5 (16)                             |
| Recommended fuel               | see MTU fluids & lubrication spec. |
| Total fuel flow: l/hr (gal/hr) | 600 (159)                          |

### // Fuel Consumption<sup>②</sup>

|                          | gal/hr | l/hr | g/kwh |
|--------------------------|--------|------|-------|
| At 100% of power rating: | 62     | 234  | 199   |
| At 75% of power rating:  | 45     | 172  | 195   |
| At 50% of power rating:  | 31     | 116  | 198   |

### // Cooling/Radiator System

|                                           |              |
|-------------------------------------------|--------------|
| Water pump capacity: l/min (gpm)          | 667 (176)    |
| Heat rejection to coolant: kW (BTUM)      | 395 (22,463) |
| Heat rejection to after cooler: kW (BTUM) | 225 (12,796) |
| Heat radiated to ambient: kW (BTUM)       | 45 (2,559)   |
| Engine coolant capacity: l (gal)          | 130 (34)     |

### // Air Requirements<sup>③</sup>

|                           |           |
|---------------------------|-----------|
| Aspirating: m³/min (SCFM) | 72 (2540) |
|---------------------------|-----------|

### // Exhaust System

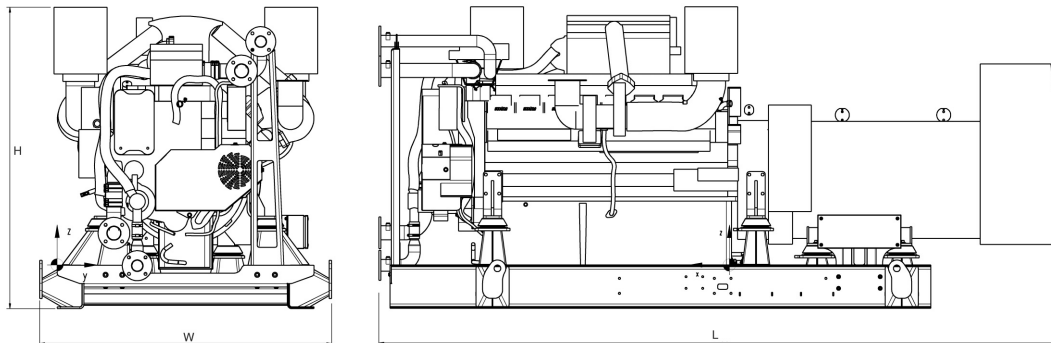
|                                      |            |
|--------------------------------------|------------|
| Gas temp. (stack): °C (°F)           | 565 (1049) |
| Gas volume flow                      |            |
| temp: m³/min (SCFM)                  | 198 (6991) |
| Maximum allowable back pressure: kPa | 8.5        |

① Represents standard product only. Consult Factory/MTU Onsite Energy distributor for additional configurations.

② Values in accordance with ISO 3046-1. Conversion calculated with fuel density of 0.83 g/ml.

③ Air density = 1.184 kg/m³ (0.0739 lbm/ft³)

## WEIGHTS AND DIMENSIONS



Drawing above for illustration purposes only, based on a standard open power 400 Volt engine-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) | 4100 x 1750 x 1809 mm (161.4 x 69 x 71.2 inch) | 5945 kg (13,106 lbs)   |

Weights and dimensions are based on open power units and are estimates only. Consult the factory for accurate weights and dimensions for your specific engine-generator set.

## SOUND DATA

// Consult your local MTU Onsite Energy distributor for sound data.

## EMISSIONS DATA

// Consult your local MTU Onsite Energy distributor for emissions data.

## 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 8528-1, ISO3046-1, BS5514, AS 2789 and DIN6271.

// Deration factor:

Altitude: Consult your local MTU Onsite Energy distributor for altitude derations.

Temperature: Consult your local MTU Onsite Energy distributor for temperature derations.

Materials and specifications subject to change without notice.