DIESEL GENERATOR SET
MTU 18V2000 DS1400

1250 kVA / 50 Hz / Prime
380 - 3300V

Reference MTU 18V2000 DS1400 (1400 kVA) for Standby Rating Technical Data

SYSTEM RATINGS

Prime

Voltage (L-L)	380V	400V	415V	3300V
Phase	3	3	3	3
PF	0.8	0.8	0.8	0.8
Hz	50	50	50	50
kW	1000	1000	1000	1000
kVA	1250	1250	1250	1250
Amps	1899	1804	1739	219
skVA@30% Voltage Dip	2450	3510	3040	2020
Generator Model*	742RSL4050	742RSL4050	742RSL4050	742FSM4366
Temp Rise	125 °C/40 °C	125 °C/40 °C	125 °C/40 °C	125 °C/40 °C
Connection	4 BAR WYE	4 BAR WYE	4 BAR WYE	6 LEAD WYE

* Consult the factory for alternate configuration.

CERTIFICATIONS AND STANDARDS

// **Emissions –** Fuel Optimized

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

// **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
- Permissible average power output during 24 hours of operation is approved up to 75%.

STANDARD FEATURES*

// MTU Onsite Energy is a single source supplier
// Global Product Support
// 2 Year Standard Warranty
// 18V 2000 Diesel Engine
- 40.2 Liter Displacement
- Common Rail Fuel Injection
- 4-Cycle

// Engine-generator Resilient Mounted
// Complete Range of Accessories
// Generator
- Brushless, Rotating Field Generator
- 2/3 Pitch Windings
- PMG (Permanent Magnet Generator) supply to regulator
- 300% Short Circuit Capability

// 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 & S/O Valve
Full Flow Oil Filter
Closed Crankcase Ventilation
Jacket Water Pump
Thermostat
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 Rack & Cables
Flexible Fuel Connectors
Flexible Exhaust Connection

// 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
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
125 °C Maximum Prime Temperature Rise
1 Bearing, Sealed
Flexible Coupling
Full Amortisseur Windings
125% Rotor Balancing
3-Phase Voltage Sensing
±0.25% Voltage Regulation
100% of Rated Load - One Step
5% Maximum Total Harmonic Distortion

// Digital Control Panel(s)

Digital Metering
Engine Parameters
Generator Protection Functions
Engine Protection
CANBus ECU Communications
Windows®-Based Software
Multilingual Capability
Remote Communications to RDP-110 Remote Annunciator
Programmable Input and Output Contacts
UL Recognized, CSA Certified
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	MTU
Model	18V 2000 G26F
Type	4-Cycle
Arrangement	18-V
Displacement: L (in^3)	40.2 (2,448)
Bore: cm (in)	13.5 (5.3)
Stroke: cm (in)	15.6 (6.15)
Compression Ratio	17.5
Rated RPM	1,500
Engine Governor	Electronic Isochronous (ADEC)
Maximum Power: kWm (bhp)	1,102 (1,477)
Speed Regulation	±0.25%
Air Cleaner	Dry

// Liquid Capacity (Lubrication)

Total Oil System: L (gal)	122 (32.2)
Engine Jacket Water Capacity: L (gal)	73 (19.3)
System Coolant Capacity: L (gal)	185 (48.9)

// Electrical

Electric Volts DC	24
Cold Cranking Amps Under -17.8 °C (0 °F)	2,800

// Fuel System

Fuel Supply Connection Size	#12 JIC 37° Female 1" NPT Adapter Provided
Fuel Return Connection Size	#12 JIC 37° Female 1" NPT Adapter Provided
Maximum Fuel Lift: m (ft)	5 (16)
Recommended Fuel	Diesel #2
Total Fuel Flow: L/hr (gal/hr)	1,500 (396)

// Fuel Consumption

At 100% of Power Rating: L/hr (gal/hr)	250 (66)
At 75% of Power Rating: L/hr (gal/hr)	188 (50)
At 50% of Power Rating: L/hr (gal/hr)	130 (34)

// 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_20)	0.13 (0.5)
Water Pump Capacity: L/min (gpm)	772 (204)
Heat Rejection to Coolant: kW (BTUM)	430 (24,454)
Heat Rejection to After Cooler: kW (BTUM)	215 (15,923)
Heat Radiated to Ambient: kW (BTUM)	87.1 (5,236)
Fan Power: kW (hp)	31.5 (42.2)

// Air Requirements

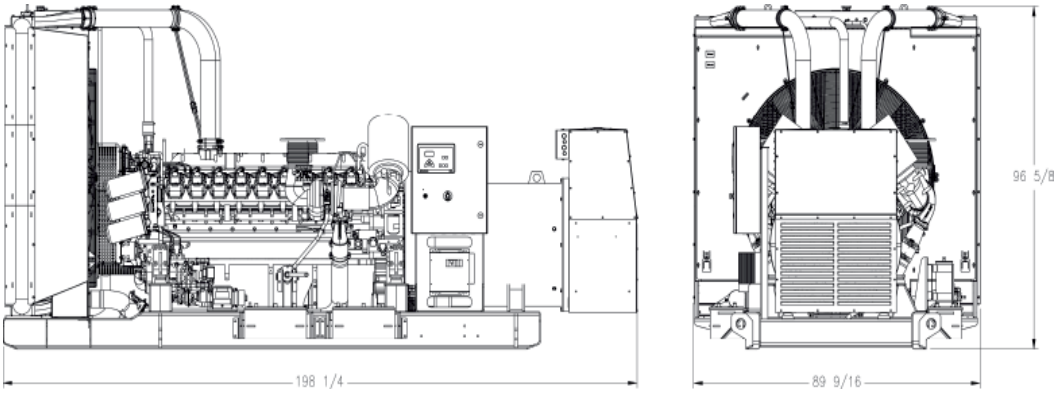
Aspirating: *m^3/min (SCFM)	80.4 (2,839)
Air Flow Required for Rad. Cooled Unit: *m^3/min (SCFM)	1,480 (52,266)
Remote Cooled Applications; Air Flow Required for Dissipation of Radiated Gen-set Heat for a Max of 25 °F Rise: *m^3/min (SCFM)	338 (12,510)

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

// Exhaust System

Gas Temp. (Stack): °C (°F)	485 (905)
Gas Volume at Stack Temp: m^3/min (CFM)	206 (7,275)
Maximum Allowable Back Pressure: kPa (in. H_20)	5 (20)

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 (less tank)
Open Power Unit (OPU)	5,036 x 2,275 x 2,454 mm (198.3 x 89.6 x 96.6 in)	9,525 kg (21,000 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	Prime Full Load
Level 0: Open Power Unit dB(A)	85.5

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
C/F	C/F	C/F

All units are in g/hp-hr and at 100% load.
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 (not shown) from each engine is guaranteed to be below the US EPA Standards at the US EPA defined conditions.

RATING DEFINITIONS AND CONDITIONS

// 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%.

// 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