

DIESEL GENERATOR SET

MTU 6R0120 DS 150

135 kWe / 60 Hz / Prime
208 - 600V

Reference MTU 6R0120 DS 150 (150 kWe) for Standby Rating Technical Data



SYSTEM RATINGS

Prime

Voltage (L-L)	240V	240V	208V	240V	380V	480V	600V
Phase	1	1	3	3	3	3	3
PF	1	1	0.8	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60	60	60
kW	135	135	135	135	135	135	135
kVA	135	135	169	169	169	169	169
Amps	563	563	468	406	256	203	162
skVA@30%							
Voltage Dip	188	196	296	296	282	394	394
Generator							
Model	431CSL6206	431PSL6224	431CSL6202	431CSL6202	431CSL6204	431CSL6202	431PSL6240
Temp Rise	105 °C/40 °C	105 °C/40 °C	105 °C/40 °C	105 °C/40 °C	105 °C/40 °C	105 °C/40 °C	105 °C/40 °C
Connection	12 LEAD DOUBLE DELTA	4 LEAD	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	12 LEAD WYE	4 LEAD WYE

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
- OSHPD Pre-Approval

// **Power Rating**

- Accepts Rated Load in One Step Per NFPA 110

// **UL 2200 / CSA** – Optional

- UL 2200 Listed
- CSA Certified
- CE Marking Provided

// **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

STANDARD FEATURES*

- // MTU Onsite Energy is a single source supplier
 - // Global Product Support
 - // 2 Year Standard Warranty
 - // OM926LA Diesel Engine
 - 7.2 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 Cleaner	105 °C Max. Prime Temperature Rise
Oil Pump	1 Bearing, Sealed
Oil Drain Extension and S/O Valve	Flexible Coupling
Full Flow Oil Filter	Full Amortisseur Windings
Fuel Filter with Water Separator	125% Rotor Balancing
Jacket Water Pump	3-Phase Voltage Sensing
Thermostat	100% of Rated Load - One Step
Blower Fan and Fan Drive	5% Max. Total Harmonic Distortion
Radiator - Unit Mounted	
Electric Starting Motor - 12V	
Governor - Electronic Isochronous	
Base - Formed Steel	
SAE Flywheel and Bell Housing	
Charging Alternator - 12V	
Battery Box and Cables	
Flexible Fuel Connectors	
Flexible Exhaust Connection	
EPA Certified Engine	

// 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 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
NFPA 110 Compatible

// 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

* Represents standard product only. Consult Factory/MTU Onsite Energy Distributor for additional configurations.

APPLICATION DATA

// Engine

Manufacturer	Mercedes-Benz
Model	OM926LA
Type	4-Cycle
Arrangement	6-Inline
Displacement: L (in ³)	7.2 (439)
Bore: cm (in)	10.6 (4.17)
Stroke: cm (in)	13.6 (5.35)
Compression Ratio	17.5:1
Rated RPM	1,800
Engine Governor	MR2 / ADM3
Max. Power: kWm (bhp)	225 (302)
Speed Regulation	±0.25%
Air Cleaner	Dry

// Liquid Capacity (Lubrication)

Total Oil System: L (gal)	29 (7.7)
Engine Jacket Water Capacity: L (gal)	10 (2.6)
System Coolant Capacity: L (gal)	24.1 (6.4)

// Electrical

Electric Volts DC	12
Cold Cranking Amps Under -17.8 °C (0 °F)	950

// Fuel System

Fuel Supply Connection Size	-6 JIC
Fuel Supply Hose Size	3/8" ID
Fuel Return Connection Size	-6 JIC
Fuel Return Hose Size	3/8" ID
Max. Fuel Lift: m (ft)	2.6 (8.5)
Recommended Fuel	Diesel #2
Total Fuel Flow: L/hr (gal/hr)	330.5 (87.3)

// Fuel Consumption *

At 100% of Power Rating: L/hr (gal/hr)	36 (9.5)
At 75% of Power Rating: L/hr (gal/hr)	26.9 (7.1)
At 50% of Power Rating: L/hr (gal/hr)	18.5 (4.9)

* Based on 431CSL6202 480 Volt generator set

// 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 ₂ O)	0.12 (0.5)
Water Pump Capacity: L/min (gpm)	143 (37)
Heat Rejection to Coolant: kW (BTUM)	72.7 (4,134)
Heat Rejection to Air to Air: kW (BTUM)	47.4 (2,696)
Heat Radiated to Ambient: kW (BTUM)	28.7 (1,632)
Fan Power: kW (hp)	15.6 (22.1)

// Air Requirements

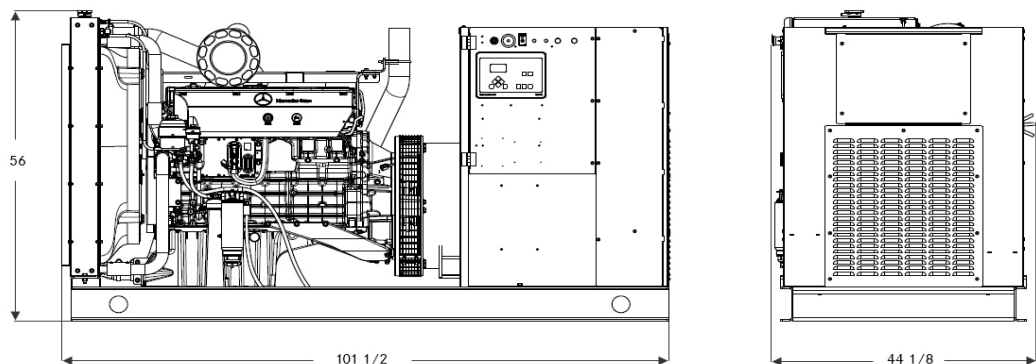
Aspirating: *m ³ /min (SCFM)	12.8 (452)
Air Flow Required for Rad.	
Cooled Unit: *m ³ /min (SCFM)	408 (14,408)
Remote Cooled Applications; Air Flow Required for Dissipation of Radiated Generator Set Heat for a Max of 25 °F Rise: *m ³ /min (SCFM)	104.9 (3,705)

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

// Exhaust System

Gas Temp. (Stack): °C (°F)	410 (770)
Gas Volume at Stack	
Temp: m ³ /min (CFM)	36.8 (1,300)
Max. Allowable Back Pressure: kPa (in. H ₂ O)	10.5 (42)

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

Open Power Unit (OPU)

Dimensions (L x W x H)

2,580 x 1,121 x 1,422 mm (101.57 x 44.13 x 56 in)

Weight (less tank)

1,632-2,120 kg (3,598-4,674 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

Level 0: Open Power Unit dB(A)

Prime Full Load

88.7

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

3.93

CO

1.2

PM

0.06

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.

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, overload power in accordance with 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

MTU Onsite Energy

A Rolls-Royce Power Systems Brand

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