DIESEL ENGINE-GENERATOR SET
AIR CHARGE-AIR COOLING

500 kWe / 60 Hz / Standby
450 kWe / 60 Hz / Prime
208 - 600V

SYSTEM RATINGS

Standby	DS500D6SPA	DS500D6SJA	DS500D6SVA	DS500D6SWA	DS500D6SRA	DS500D6SNA
Voltage (L-L)	208V**	240V**	380V	440V	480V**	600V**
Phase	3	3	3	3	3	3
PF	0.8	0.8	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60	60
kW	500	500	500	500	500	500
kVA	625	625	625	625	625	625
AMPS	1735	1504	950	820	752	601
skVA@30% Voltage Dip	1040	1040	970	1200	1290	1430
Generator Model	572RSL4029	572RSL4029	573RSL4033	572RSL4029	572RSL4027	572RSS4272
Temp Rise	130°C/27°C	130°C/27°C	130°C/27°C	130°C/27°C	130°C/27°C	130°C/40°C
Connection	12 LEAD LOW WYE	12 LEAD HI DELTA	12 LEAD HI WYE	12 LEAD HI WYE	12 LEAD HI WYE	6 LEAD WYE

Prime	DP450D6SPA	DP450D6SJA	DP450D6SVA	DP450D6SWA	DP450D6SRA	DP450D6SNA
Voltage (L-L)	208V**	240V**	380V	440V	480V**	600V**
Phase	3	3	3	3	3	3
PF	0.8	0.8	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60	60
kW	450	450	450	450	450	450
kVA	563	563	563	563	563	563
AMPS	1561	1353	855	738	677	541
skVA@30% Voltage Dip	790	790	660	900	1090	1040
Generator Model	572RSL4025	572RSL4025	572RSL4029	572RSL4025	572RSL4025	572RSS4270
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
Connection	12 LEAD LOW WYE	12 LEAD HI DELTA	12 LEAD HI WYE	12 LEAD HI WYE	12 LEAD HI WYE	6 LEAD WYE

** UL2200 Offered

STANDARD FEATURES

// EPA Tier 2 Certified
// Engine-Generator Set Tested to ISO 8528-5 for Transient Response
// UL2200, CSA Certified – Offered
// Accepts Rated Load in One Step Per NFPA 110
// All engine-generator sets are prototype and factory tested
// MTU Onsite Energy is a single source supplier
// Global Product Support
// 2 Year Standard Warranty
// 10V1600 Diesel Engine
- 17.5 Liter Displacement
- Common Rail Fuel Injection
- 4-Cycle
// Complete Range of Accessories
// Engine-generator resilient mounted
// Generator
- Brushless, Rotating Field Generator
- PMG (Permanent Magnet Generator) supply to regulator
- 300% Short Circuit Capability
- 2/3 Pitch Windings
// 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
Full Flow Oil Filters
Closed Crankcase Ventilation
Jacket Water Pump
Thermostats
Exhaust Manifold – Dry
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 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 Maximum Standby 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
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
Up to 11 Contact Outputs
UL Recognized, CSA Certified, CE Approved
Event Recording
IP 54 Front Panel Rating with Integrated Gasket
NFPA110 Compatible

APPLICATION DATA

// Engine

Manufacturer	MTU
Model (Standby)	10V1600G80S
Model (Prime)	10V1600G20S
Type	4-Cycle
Arrangement	10-V
Displacement: L (Cu In)	17.5 (1,068)
Bore: cm (in)	12.2 (4.8)
Stroke: cm (in)	15 (5.91)
Compression Ratio	17.5:1
Rated RPM	1,800
Engine Governor	Electronic Isochronous (ADEC)
Max Power: Standby: kWm (bhp)	561 (752)
Max Power: Prime: kWm (bhp)	511 (685)
Speed Regulation	±0.25%
Air Cleaner	Dry

// Liquid Capacity (Lubrication)

Total Oil System: L (gal)	61 (16)
Engine Jacket Water Capacity: L (gal)	60 (15.9)
System Coolant Capacity: L (gal)	149 (39.4)

// Electrical

Electric Volts DC	24
Cold Cranking Amps Under -17.8°C (0°F)	1,000

// Fuel System

Fuel Supply Connection Size (in)	M 20x1.5 Male/#10 JIC Female
Fuel Return Connection Size (in)	M 14x1.5 Male/#6 JIC Female
Maximum Fuel Lift: m (ft)	5 (16)
Recommended Fuel	Diesel #2
Total Fuel Flow: L/hr (gal/hr)	401.3 (106)

// Fuel Consumption

	STANDBY	PRIME
At 100% of Power Rating: L/hr (gal/hr)	125.3 (33.1)	115.4 (33.1)
At 75% of Power Rating: L/hr (gal/hr)	95.8 (25.3)	90.84 (24)
At 50% of Power Rating: L/hr (gal/hr)	72.3 (19.1)	67.75 (17.9)

// Cooling - Radiator System

	STANDBY	PRIME
Ambient Capacity of Radiator: °C (°F)	50 (122)	50 (122)
Max. Restriction of Cooling Air, Intake, and Discharge Side of Rad.: kPa (in. H_20)	0.2 (0.8)	0.2 (0.8)
Water Pump Capacity: L/min (gpm)	466 (123)	466 (123)
Heat Rejection to Coolant: kW (BTUM)	235 (13,364)	225 (12,795)
Heat Rejection to After Cooler: kW (BTUM)	118 (6,710)	101 (5,744)
Heat Radiated to Ambient: kW (BTUM)	58.6 (3,332)	51.8 (2,946)

// Air Requirements

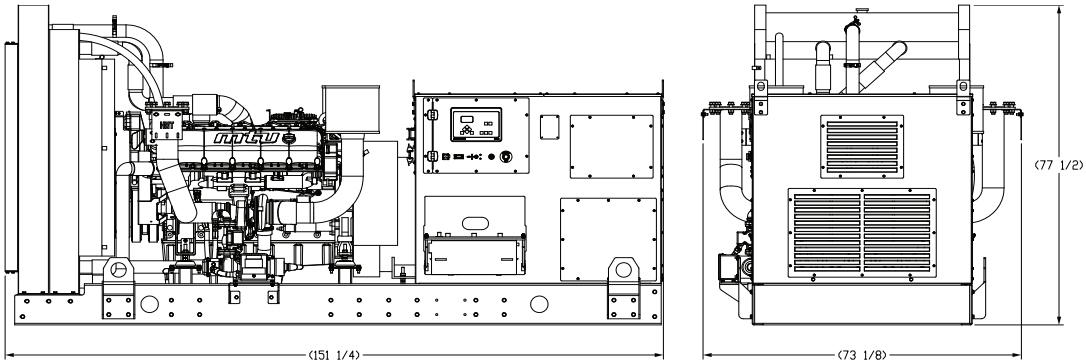
	STANDBY	PRIME
Aspirating: *m^3/min (SCFM)	35 (1,250)	34 (1,187)
Air Flow Required for Rad. Cooled Unit: *m^3/min (SCFM)	702 (24,791)	702 (24,791)
Air Flow Required for Heat Exchanger/Remote Rad. based on 25°F Rise: *m^3/min (SCFM)	213 (7,516)	188 (6,643)

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

// Exhaust System

	STANDBY	PRIME
Gas Temp. (Stack): °C (°F)	461 (862)	459 (858)
Gas Volume at Stack Temp: m^3/min (CFM)	103 (3,623)	95 (3,369)
Maximum Allowable Back Pressure: kPa (in. H_20)	15 (60.2)	15 (60.2)

WEIGHTS AND DIMENSIONS



Drawing above for illustration purposes only, based on standard open power 480 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)	3,842 x 1,858 x 1,969 mm (151.25 x 73.13 x 77.5 in)	4,598 kg (10,136 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 engine-generator set.

SOUND DATA

Unit Type	Standby Full Load	Prime Full Load
Level 0: Open Power Unit (dBA)	93.5	93.4

Sound data is provided at 7 m (23 ft). Engine-generator set tested in accordance with ISO 8528-10 and with infinite exhaust.

EMISSIONS DATA

NO_x + NMHC	CO	PM
9.25	0.6	0.04

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. Permissible average power output during 24 hours of operation is approved up to 85%.

// 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, AS 2789, and DIN 6271. Permissible average power output during 24 hours of operation is approved up to 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.

Materials and specifications subject to change without notice.
C/F = Consult Factory/MTU Onsite Energy Distributor

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