DIESEL GENERATOR SET
DP90D6S

90 kWe / 60 Hz / Prime
208 - 600V

(Reference DS100D6S for Standby Rating Technical Data)

SYSTEM RATINGS

Prime	DP90D6SGA	DP90D6SDA	DP90D6SPA	DP90D6SJA	DP90D6SRA	DP90D6SNA
Voltage (L-L)	240V**	240V**	208V**	240V**	480V**	600V**
Phase	1	1	3	3	3	3
PF	1.0	1.0	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60	60
kW	90	90	90	90	90	90
kVA	90	90	112.5	112.5	112.5	112.5
Amps	375	375	312	271	135	108
skVA@30% Voltage Dip	136	193	323	323	430	333
Generator Model	431CSL6204	431PSL6224	363CSL1607	363CSL1607	363CSL1607	363PSL1658
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 ZIG-ZAG	4 LEAD	12 LEAD LOW WYE	12 LEAD HI DELTA	12 LEAD HI WYE	4 LEAD WYE

** UL 2200 Offered

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

// **UL 2200 / CSA – Optional**
- UL 2200 Listed
- CSA Certified

// **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

STANDARD FEATURES*

// MTU Onsite Energy is a single source supplier
// Global Product Support
// 2 Year Standard Warranty
// 4045HF285 Diesel Engine
- 4.5 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 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
Oil Pump
Oil Drain Extension & S/O Valve
Full Flow Oil Filter
Fuel Filter with Water Separator
Jacket Water Pump
Thermostats
Blower Fan & Fan Drive
Radiator - Unit Mounted
Electric Starting Motor - 12V
Governor – Electronic 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
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
105 °C Maximum Prime Temperature Rise
1 Bearing, Sealed
Flexible Coupling
Full Amortisseur Windings
125% Rotor Balancing
3-Phase Voltage Sensing
100% of Rated Load - One Step
5% Maximum Total Harmonic Distortion

// 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
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
NFPA 110 Compatible

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

APPLICATION DATA

// Engine

Manufacturer	John Deere
Model	4045HF285
Type	4-Cycle
Arrangement	4-Inline
Displacement: L (in^3)	4.5 (275)
Bore: cm (in)	10.6 (4.19)
Stroke: cm (in)	12.7 (8)
Compression Ratio	19:1
Rated RPM	1,800
Engine Governor	JDEC
Maximum Power: kWm (bhp)	107 (144)
Speed Regulation	±0.25%
Air Cleaner	Dry

// Liquid Capacity (Lubrication)

Total Oil System: L (gal)	12 (3.2)
Engine Jacket Water Capacity: L (gal)	12.5 (3.3)
System Coolant Capacity: L (gal)	20.1 (5.3)

// Electrical

Electric Volts DC	12
Cold Cranking Amps Under -17.8 °C (0 °F)	925

// Fuel System

Fuel Supply Connection Size	3/8” NPT
Fuel Return Connection Size	3/8” NPT
Maximum Fuel Lift: m (ft)	2 (6.7)
Recommended Fuel	Diesel #2
Total Fuel Flow: L/hr (gal/hr)	74.6 (19.7)

// Fuel Consumption

	PRIME
At 100% of Power Rating: L/hr (gal/hr)	28 (7.4)
At 75% of Power Rating: L/hr (gal/hr)	22.3 (5.9)
At 50% of Power Rating: L/hr (gal/hr)	15.9 (4.2)

// Cooling - Radiator System

	PRIME
Ambient Capacity of Radiator: °C (°F)	50 (122)
Maximum Restriction of Cooling Air, Intake, and Discharge Side of Rad.: kPa (in. H_20)	0.12 (0.5)
Water Pump Capacity: L/min (gpm)	180 (48)
Heat Rejection to Coolant: kW (BTUM)	56 (3,190)
Heat Rejection to Air to Air: kW (BTUM)	17.6 (1,002)
Heat Radiated to Ambient: kW (BTUM)	13.8 (785)
Fan Power: kW (hp)	6.5 (8.7)

// Air Requirements

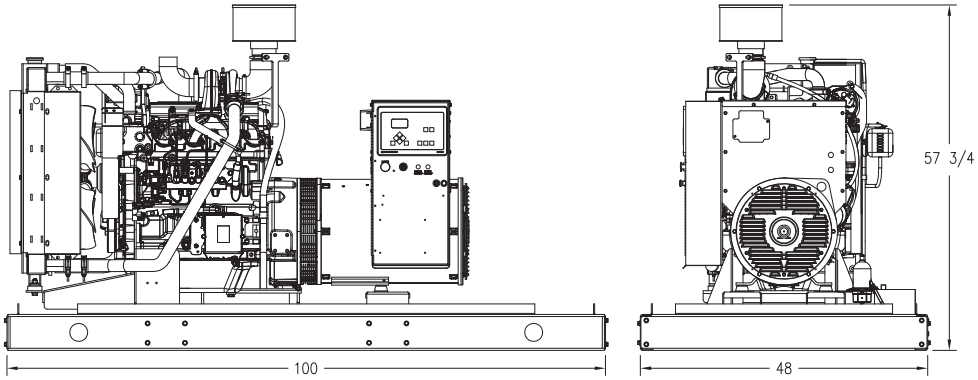
	PRIME
Aspirating: *m^3/min (SCFM)	7.7 (273)
Air Flow Required for Rad. Cooled Unit: *m^3/min (SCFM)	187 (6,587)
Remote Cooled Applications; Air Flow Required for Dissipation of Radiated Gen-set Heat for a Max of 25 °F Rise: *m^3/min (SCFM)	50 (1,771)

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

// Exhaust System

	PRIME
Gas Temp. (Stack): °C (°F)	560 (1,040)
Gas Volume at Stack Temp: m^3/min (CFM)	21.2 (750)
Maximum Allowable Back Pressure: kPa (in. H_20)	7.5 (30)

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)
OPU	2,540 x 1,219 x 1,473 mm (100 x 48 x 58 in)	908 kg (2,002 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)	83.3

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
2.9	1.3	0.14

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

// 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, AS 2789, and DIN 6271.

// 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