

DIESEL GENERATOR SET

AIR CHARGE-AIR COOLING

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

(Reference DP400D5S – Fuel optimized and DP400D5S – Exhaust optimized for prime rating technical data)



Optional equipment shown. Standard equipment may vary.

BENEFITS

- // Low installation cost
- // Best fuel consumption values
- // Long maintenance intervals
- // High-efficiency components
- // Best-in-class reliability and availability

SYSTEM RATINGS^①

Standby	DS440D5S	DS440D5S	DS440D5S
Voltage (L-L)	380V	400V	415V
Phase	3	3	3
PF	0.8	0.8	0.8
Hz	50	50	50
kW	352	352	352
kVA	440	440	440
AMPS	669	635	612
Generator Model	572RSL7724	572RSL7724	572RSL7724
Temp Rise	150°C/40°C	150°C/40°C	150°C/40°C
Connection	10 LEAD WYE	10 LEAD WYE	10 LEAD WYE

^① 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 prototype and factory tested

// Power Rating

- Permissible average power output during 24 hours of operation up to 85%

STANDARD EQUIPMENT^①

// Engine

Air cleaners

Oil pump

Oil drain extension & s/o valve

Full flow oil filters

Closed crankcase ventilation

Jacket water pump

Thermostat

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

Flexible fuel connectors

Fuel system: common rail

// Customer Interface

Smart connect

// Generator

NEMA MG1, IEEE and ANSI standards compliance for temperature rise and motor

VDE 0530, IEC 34.1, BS 5000, CSA C22.2-100, AS 1359

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

150°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

Insulation class H

Protection class IP20

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

STANDARD FEATURES^①

- // The generator set complies to G2
- // Engine-generator set tested to ISO 8528-5 for transient response
- // 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
- // Cooling system 50°C (integral set-mounted; engine driven fan)
- // 8V1600 diesel engine (14,0 liter displacement; common rail fuel injection; 4-cycle)
- // Engine-generator resiliently mounted
- // Complete range of accessories
- // Brushless, rotating field generator (PMG excitation; 300% short circuit capability; 2/3 pitch stator windings)
- // Terminal box

APPLICATION DATA

// Engine

Manufacturer	MTU
Model	8V1600G80F
Type	4-Cycle
Arrangement	8-V
Displacement/cylinder: l (cu in)	14 (854)
Bore: mm (in)	122 (4.8)
Stroke: mm (in)	150 (5.91)
Compression ratio	17.5:1
Rated speed rpm	1500
Engine governor	electronic isochronous
Max power: kWm (bhp)	394 (528)
Speed regulation	±0.25%
Air filter	Dry

// Lube Oil Capacity

Total oil system: l (gal)	46 (12.2)
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// Electrical

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

// Fuel System

Fuel supply connection size ^②	24° Cone M22 x 1.5 Male
Fuel return connection size ^②	24° Cone M16 x 1.5 Male
Maximum fuel lift: m (ft)	5 (16)
Recommended fuel	see MTU fluids & lubrication spec.
Total fuel flow: l/hr (gal/hr)	402 (123)

// Fuel Consumption

	STANDBY
At 100% of power rating: l/hr (gal/hr)	90 (23.7)
At 75% of power rating: l/hr (gal/hr)	67 (17.7)
At 50% of power rating: l/hr (gal/hr)	49 (13)

// Cooling/Radiator System

	STANDBY
Ambient capacity of radiator: °C (°F)	50 (122)
Max. restriction of cooling air, intake, and discharge side of rad.: kPa (in. H ₂ O)	0,2 (0,803)
Water pump capacity: l/min (gpm)	362 (95)
Heat rejection to coolant: kW (BTUM)	195 (11,090)
Heat rejection to after cooler: kW (BTUM)	75 (4,265)
Heat radiated to ambient: kW (BTUM)	16 (910)
Engine coolant capacity: l (gal)	50 (13,2)
Radiator coolant capacity: l (gal)	34 (9,0)
Coolant to cooler temperature: °C (°F)	95 (203)

// Air Requirements^③

	STANDBY
Aspirating: m ³ /min (SCFM)	25.2 (891)
Air flow required for rad. cooled unit: m ³ /min (SCFM)	510 (18,010)
Remote cooled applications; air flow required for dissipation of radiated gen-set heat for a max of 25°F rise: m ³ /min (SCFM)	58 (2,052)

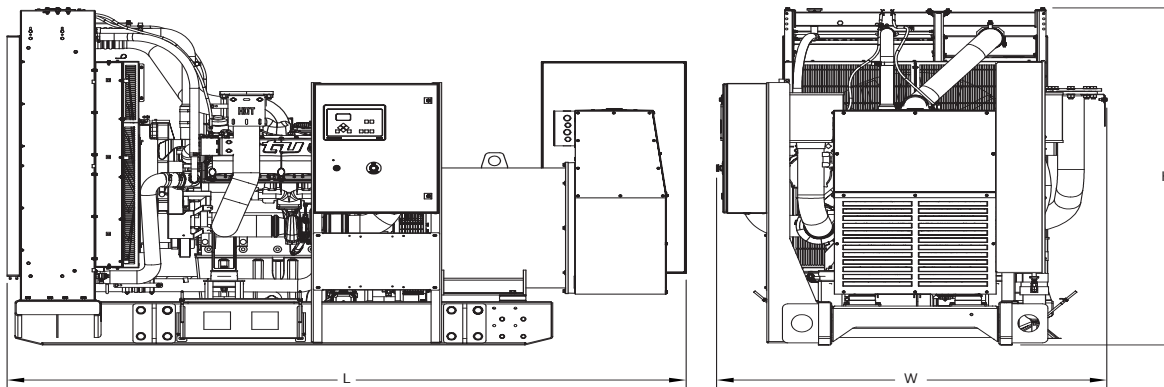
// Exhaust System

	STANDBY
Gas temp. (stack): °C (°F)	491 (916)
Gas volume at stack temp: m ³ /min (CFM)	72 (2,543)
Maximum allowable back pressure: kPa (in. H ₂ O)	15 (60.2)

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

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)
Open Power Unit (OPU)	3255 x 1871 x 1975 mm (128.13 x 73.63 x 77.75 in)	3992 kg (8,800 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, ISO 3046-1, BS 5514, AS 2789 and DIN 6271.
- // 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.