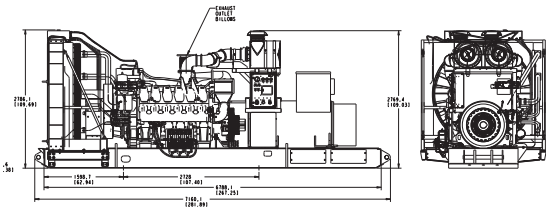
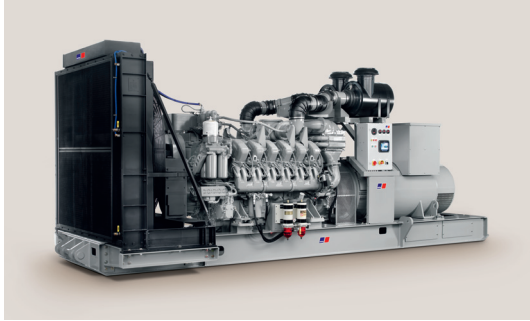


# Electric Drilling Package

## Diesel Engine Genset – 60Hz

1105 kW @ 1200 rpm plus 10% Overload Capability

1750 kVA (Generator oversized to meet low power factor requirements)



### Dimensions and Masses

Engine	Dimensions mm	Mass, dry
12V	7160x2521x2785 (282x100x110 in.)	16556 kg (36500 lb)

All dimensions are approximate, for complete information refer to the installation drawing.

Engine Model		
Bore/stroke	mm	170/210
Cylinder configuration		90°V
Displacement/cylinder	l	4.77 (290 cu. in.)
Displacement, total	l	12V: 57.2
Fuel specification		EN 590, Grade No.1-D/2-D (ASTM D975-00)

<b>Genset Type</b>		PEDPG12V4000-2A0
<b>Engine Speed</b>		1200
<b>Engine type</b>		12V 4000 G73
<b>Generator type</b>		LS 6601-06
<b>Voltage</b>	V	600
<b>Power Factor</b>		0.7
<b>Frequency</b>	Hz	60
<b>Fuel Consumption</b>		
100% load	g/kWh (lb/hp-h)	196 (0.322)
75% load	g/kWh (lb/hp-h)	204 (0.335)
50% load	g/kWh (lb/hp-h)	207 (0.340)
25% load	g/kWh (lb/hp-h)	224 (0.368)
<b>Mechanical radiator, unit-mounted</b>		
Limiting Air Temperature (LAT)	°C (°F)	55 (131)
Fan air flow	m <sup>3</sup> /s (CFM)	46.25 (98000)
<b>Air intake</b>		
Intake air depression	mbar (in. Water)	50 (20)
Intake air flow @ 110% Load	m <sup>3</sup> /s (CFM)	1.7 (7630)
<b>Exhaust System</b>		
Exhaust volume flow (at exhaust temperature) - CP	m <sup>3</sup> /s (CFM)	3.6 (7630 CFM)
Exhaust gas temperature - CP	°C (°F)	376 (710)
Max. Exhaust back pressure	mbar (in. Water)	50 (20)
<b>Generator</b>		
Temperature rise	°C	80
<b>Lube System</b>		
Engine oil capacity, Initial Fill	l (gal)	221 (60)
Engine Surface Airborne noise level at 1 m	dB(A)	102
Exhaust noise level at 1 m (unsilenced)	dB(A)	113

#### Reference conditions:

- > Ambient air temperature: 25°C (77°F)
- > Ambient air pressure: 1000 mbar (14.5 psi)
- > Genset Ratings: 1750 kVA, Generator oversized to meet low factor requirements
- > Charge air coolant temperature: 45°C (113° F)
- > Altitude above sea level: 100 m (328 ft)



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## Application

## Power definition

3B Continuous operation w/ variable load Load factor: < 75%, Operating hours: unrestricted, Overload: 10% capability (ICXN)

Power output within 5% tolerance at standard conditions. Power definition according to ISO 3046 (ratings also correspond to SAE J 1995 and SAE J 1349 standard conditions)  
Consult your MTU distributor/dealer for the rating that will apply to your specific application.

## Standard Equipment

Diesel Engine	<p>Grey cast-iron crankcase with inspection ports, Flywheel housing SAE 00, flywheel 21, Forged crankshaft, forged connecting rods, Four-valve, individual cylinder heads with exhaust valve rotators "Rotocap", Composite pistons with aluminium skirt and steel crown, Piston cooling via oil spray nozzle, Gear train for accessory drives, Dry exhaust manifolds, Vibration damper, All necessary on-engine air, exhaust, coolant, fuel and oil pipework, Engine equipped with 2 - turbochargers and 1 Intercooler, Closed crankcase vent system, 100 A Battery charging alternator</p>
Starting System	Electric starter 9 kW 24V 50MT DELCO, Left & Right Bank
Fuel System	<p>"Common Rail" fuel injection system, with low and high pressure fuel pumps, electronically controlled injectors, Fuel main filter on engine (without diverter valve), Connecting hardware and set of fuel pipes with hose lines, Double walled fuel injection pipes with leakage monitoring, Skid Mounted Racor 75/1000FHX model duplex pre-filer w/shutoff valve, Fuel piping and connections with Quick-Connect fuel connections for supply and return fuel at front of skid.</p>
Lube Oil System	<p>Lube oil circulation pump with safety valve for forced-feed with lubrication and piston cooling; lube oil heat exchanger; oil filler neck, dipstick for oil level measurement on engine, Lube oil filters multi stage, without diverter valve, Lube oil centrifuge for extended lube oil change intervals, Standard Oil Pan (allows for inclination of 15°), Lube oil drain piping and quick-connect connection at front of skid.</p>
Combustion Air System	<p>Exhaust turbochargers, Intercooler, Set of heavy duty, dry-type, 2-stage air filters, contamination indicator, filter mountings and flexible engine-filter connections, combustion air flaps for interruption of the combustion air in case of overspeed, incl. solenoid 24 VDC</p>
Exhaust Gas System	<p>1-exhaust bellow with companion flange for connection to both turbochargers, Exhaust muffler, log style (ship loose)</p>
Cooling System	<p>Coolant circulation pump and coolant thermostat for main coolant circuit, Coolant circulation pump and coolant thermostat for charge air coolant circuit, Aluminized Steel formed cooling water tubing and rubber hose with clamps included for radiator connections, All vent lines to radiator, 2-Circuit Global Heat Transfer radiator assembly with 1-blower fan (72 hp engine driven), single bolt-on surge tank, integrated fuel cooling circuit, rated 55°C.</p>
Base Frame/Mounting of Genset	<p>Engine mounts at engine free and driving end rigid, Alternator rigid mounting to base frame, Integrated &amp; Closed Battery Compartments and Battery Cabling, A572 steel base frame</p>

Standard Equipment	
Power Transmission	<p>Engine flywheel for free standing generator,</p> <p>Resilient Coupling between engine and generator,</p> <p>Coupling guard</p>
Mounting System	<p>Three point mounting to customer supplied master skid</p>
Engine Control/Monitoring	<p>Integrated electronic engine governor and engine management system "ADEC" for control, monitoring and protection:</p> <p>Engine speed/torque control,</p> <p>Engine monitoring and display of engine operating parameters and alarms,</p> <p>Engine protection against critical operating parameters,</p> <p>Acquisition and display of plant related measuring data,</p> <p>Communication with an external control system,</p> <p>Red and Yellow Alarm, etc.,</p> <p>Speed or torque analog input (0-10V/0-200 mA)</p>
Local Operator Panel on the skid with	<p>Mechanical gauges for: lube oil pressure, lube oil temperature, engine coolant temperature, engine speed,</p> <p>Common yellow &amp; red alarms,</p> <p>Selector switch for: Off, Local/Idle, Remote,</p> <p>Emergency stop push button,</p> <p>Maintenance lockout switch,</p> <p>Air flap position indicator,</p> <p>Automatic start sequence control,</p> <p>Multi-page color LCD display panel, fuel consumption reading +/- 10 % accuracy – accuracy limited to accuracy of ADEC ECU,</p> <p>Ground straps,</p> <p>Panel suitable for -40°C to +70° ,</p> <p>Control panel with interface plugs</p>
Instrumentation	<p>1 coolant level sensor with cable installed in coolant header tank</p>
Generator	<p>Three-phase synchronous, brushless, self-exciting, self-regulating and self-ventilating generator with built-in exciter suitable for parallel operation</p> <p>Enclosure category IP 23, Roller bearings, Insulation class H utilised to F,</p> <p>Set-point adjustment +/- 5 %, Design in accordance with IEC 60034, Voltage 600 V (3Ph.),</p> <p>Speed 1200 min<sup>-1</sup>, Frequency 60Hz, Rated Power 1750 kVA at p.f. 0.7,</p> <p>at site conditions 50°C ambient temp., 80°C Temp Rise, Site elevation 1000 m above sea level,</p> <p>Degree of protection IP 23, Excitation brushless, Winding 2/3 pitch,</p> <p>Form Wound Stator Coils, VPI with Epoxy Overspray,</p> <p>Stator RTDs, 1000hm PT, 2/Phase,</p> <p>Bearing RTD - 100 Ohm PT,</p> <p>Class 1 - Div 2 Space heaters,</p> <p>Weight approx 10910Lb</p>

Optional Equipment	
Starting System	Air Starter instead of electric starter, TDI AIR STARTER (90 to 150 PSI)
Electrical	Four x 8D BATTERIES 1150 CCA
Generator System	Air Filtration
Exhaust System	Pancake style muffler 401-C1-5110 GT, 27 - 32 dBA w/o spark arrester, Pancake style muffler 402-C1-5110 GT, 27 - 32 dBA w spark arrester, Rain cap, Thermo-wrap for exhaust silencer
Fuel system	Skid Mounted Racor 79 / 1000FHV MODEL TRIPLEX FILTER W/SHUTOFF VALVE
Local Operating Panel Options	Fuel tank monitoring and display, EMU with single cylinder exhaust temperature monitoring, Many external connections for the customer E-Stop, Stop, Start, etc., Frequency output from the flywheel
Features	Stiff A572 Steel Skid, Battery Compartments integrated into skid frame for added security, Front & Rear Tow Bars for easy maneuvering, Front & Rear Kick Plates for easy maneuvering, MTU Factory Local Operating Panel, with SAM (IP65) with Murphy PV1000 Color multi-page LCD Display, Heavy Duty, 2-stage air filtration, Aluminized Steel Form Coolant Tubing, Stainless Steel Fuel cooler piping to/from radiator, Stainless steel lube oil drain piping to front of skid with shut-off valve and cap, Stainless steel fuel supply & return piping to front of skid with quick-dDisconnect fittings

Subject to change without notice. Customization possible. Engines illustrated in this document may feature options not fitted as standard to standard engine.