M80A13SL

80 kW (60 Hz, 1800 rpm)
80 kW (50 Hz, 1500 rpm)

FEATURES AND BENEFITS

ENGINE BLOCK
- EPA Tier III and IMO Tier II compliant
- Four cylinder, inline, liquid cooled, overhead valve, marine diesels based on heavy-duty industrial engine blocks.
- Balanced, forged crankshaft with induction hardened journals and rolled fillets for long life.
- Replaceable, wet liners for long life and low rebuild costs.
- Bimetallic valves with chrome stems and rotators.
- Replaceable valve seats and guides.
- Three ring aluminum alloy pistons with Ni-Resist insert for the top ring. Keystone piston rings reduces carbon buildup under light loads.
- A single poly-vee drive belt powers the alternator and jacket water pump.

FUEL SYSTEMS
- High pressure common rail fuel injection for smooth, clean delivery.
- Direct fuel injection system.
- Ring clamp fuel filters with air bleed and drain.
- Electric fuel transfer pump.

LUBRICATION SYSTEM
- Positive displacement gear-type oil pump.
- Full flow, spin-on oil filter.
- Oil spray cooling reduces piston crown temperature.
- Jacket water, plate-type, full flow oil cooler reduces heat and prevents lube oil breakdown.
- Large capacity oil pan.
- Closed loop crankcase vent traps oil vapor to keep the engine room clean.

AIR SYSTEM
- Dry air filter silences intake noise.
- Turbocharger with jacket water cooled turbine housing for safety.
- Jacket water cooled aftercooler.

COOLING SYSTEM
- Heat exchanger with keel-cooled option.
- Gear driven seawater pump with self-priming flexible impeller. Bronze with stainless steel shaft.
- Cast-iron expansion tank.
- Two thermostats for quick warm-ups and safety.
- Cast-iron exhaust manifold for reliable temperature control.

ESP AND DC ELECTRICAL SYSTEM
- Negative ground, 12 volt DC system has circuit breaker, starter motor and alternator with regulator.
- Low oil pressure and high coolant temperature safety shutdowns.
- Optional control panels help you specify the amount and type of information required. Comprehensive list of optional alarms and safety shutdowns.
- Optional DC logic system for simplified maintenance.
- Optional pre-wired engine, panel with terminal strips.

AC GENERATOR
- Direct coupled, single bearing, 12 lead, reconnectable AC generator. Maintenance free brushless design.
- All NL generators meet or exceed class society standards with Class "H" insulation, accessible diodes, oversized ball bearings, marine grade shafts and conservative 90°/50° heat rise ratings. PMG is standard equipment.
- Engines and generators are torsionally matched for long life.
- Automatic voltage regulator, ± 1% regulation over the entire range from no load to full load.
- Configured for isochronous speed control with integral electronic governor supplied by ECU.

SPECIAL EQUIPMENT
- Welded steel base frame.
- Sparkling white polyurethane paint.
- Operator's and parts manuals.
- Optional sound enclosure for industry best sound and vibration attenuation in a compact design.

AC Output	M80A13SL	M80A13SL
60 Hz, 1800 RPM, kW	**80 kW**	
50 Hz, 1500 RPM, kW		**80 kW**
Voltage Regulation	1%	1%
Volts/Amps	208/278	380/152
Frequency Control	Isochronous	
Phase and Power Factor	Three Phase 0.8 Power Factor std.	
	Opt.: Single Phase - 1.0 Power Factor	
Generator Full Load Temp. Rise	90°C Temperature Rise at 50°C Ambient	
Lugger Diesel Engine Data		
Inline Cylinders/Aspiration/Operating Cycle	I-4/Turbo & Aftercooled/4	
Displacement - in^3 (ltr)	276 (4.5)	276 (4.5)
Bore/Stroke - in (mm)	4.19/5 (106/127)	4.19/5 (106/127)
Cooling System - Heat Exchange Standard, Keel-Cooling Optional		
Heat Rejection to Jacket Water - BTU min	5863	5863
Freshwater Pump Capacity - gpm (lpm)	40.9 (155)	36 (136)
Heat Exchanger Approx. Cooling Capacity - gal (ltr)	4.4 (17)	4.4 (17)
Keel-Cool Approx. Cooling Capacity - gal (ltr)	5.2 (20)	5.2 (20)
Seawater Pump Capacity - gpm (lpm)	52 (197)	41 (155)
Max. Seawater Pump Suction Head Lift - ft (m)	10 (3)	10 (3)
Seawater Pump Inlet Hose ID - in (mm)	2 (51)	2 (51)
Min. Seawater Inlet/Discharge Thru-Hull - in (mm)	2 (51)	2 (51)
DC Electrical		
DC Starting Voltage - standard (optional)	12 (24)	12 (24)
Min. Battery Capacity - amp hr 12V (24V)	625 (500)	625 (500)
Min. Battery Size CCA - 12V (24V)	1100 (750)	110 (750)
Starter Rolling Amps @ 0°C - 12V DC (24V DC)	920 (600)	920 (600)
12 Volt Battery Cable Size Up to 10ft (3m)	2/0	2/0
Air		
Air Consumption - cfm/ (m^3/m)	301 (8.5)	209 (5.9)
Approximate Heat Radiated to Air - BTU/min	689	689
Generator Cooling Air Flow 1&3Ø - cfm	700	575
Exhaust Gas Volume - cfm (m^3/m)	685 (19.4)	519 (14.7)
Exhaust Gas Temp. - F° (C°)	813 (434)	910 (488)
Max. Exhaust Back Pressure - in H^2O (mm H^2O)	30 (762)	30 (762)
Wet Exhaust Elbow OD - in (mm)	4 (102)	4 (102)
Dry Exhaust Elbow - in (mm)	4 (102)	4 (102)
Fuel		
Fuel Injection Pump type and Control	Electronic (HPCR)	Electronic (HPCR)
Min. Suction - in (mm)	3/8 (10)	3/8 (10)
Min. Return Line - in (mm)	1/4 (6.4)	1/4 (6.4)
Max. Fuel Transfer Pump Suction Lift - in (m)	80 (2)	80 (2)
Max. Fuel Flow to Transfer Pump - gph	19.5	18.8
Specific Fuel Consumption Max. Load - lbs. hp. hr	0.394	0.381
Approx. Fuel Rate at Max Load - gph (lph)	6.7 (25.4)	6.4 (24.1)
Fuel Supply and Return - Max Pressure PSI.	2.9	2.9
Fuel Supply and Return Height - in (m)	80 (2)	80 (2)
Max Engine Operating Angle		
Continuous (with Separate Expansion Tank)	30°	30°
Intermittent (2 Minutes)	45°	45°
Dimensions and Weight - Low Profile; Do not use for installation. Contact Factory for installation drawings and info.		
Length - in (mm)	76.75 (1949)	76.75 (1949)
Width - in (mm)	38.00 (965)	38.00 (965)
Height - in (mm)	39.31 (998)	39.31 (998)
Weight - lbs (kg)	2749 (1247)	2749 (1247)
Dimensions and Weight - Optional Enclosure; Do not use for installation. Contact Factory for installation drawings and info.		
Length - in (mm)	77.53 (1969)	77.53 (1969)
Width - in (mm)	38.00 (965)	38.00 (965)
Height - in (mm)	40.90 (1039)	40.90 (1039)
Weight - lbs (kg)	3170 (1438)	3170 (1438)

LRQA CERTIFIED ISO 9001

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