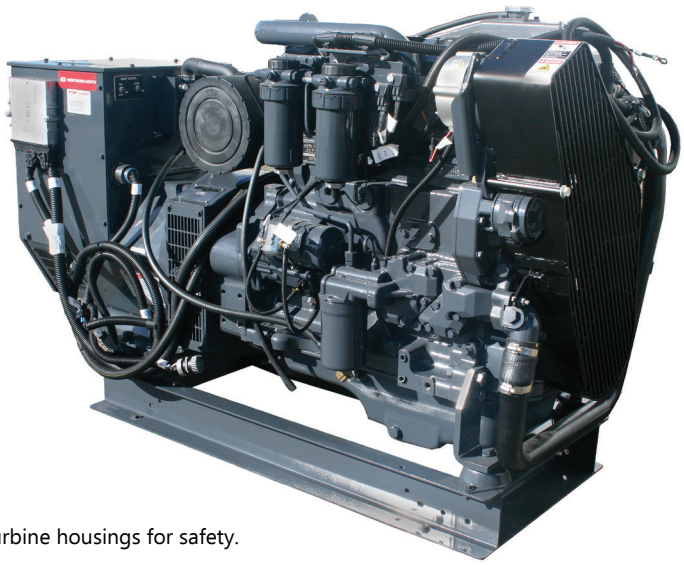
M65C13

65 kW (60 Hz, 1800 rpm, 3ph)

FEATURES AND BENEFITS



ENGINE BLOCK - Four cylinder, four cycle, in-line, liquid cooled, overhead valve, marine diesels based on heavy-duty engine blocks. Balanced, forged crankshaft with induction hardened journals and rolled fillets. Replaceable, wet cylinder 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 ring reduces carbon buildup under light loads. Dual gear-driven, counter-rotating balancing shafts for smooth operation. A single poly-vee drive belt powers the alternator and jacket-water pump.

FUEL SYSTEM - High pressure common rail fuel injection for smooth, clean delivery. Direct fuel injection system. Ring clamp fuel filters with air bleed and drain. Diaphragm-type, mechanical fuel transfer pump with manual priming lever.

LUBRICATION SYSTEM - Positive displacement gear-type oil pump. Full flow, spin-on oil filter. Oil spray cooling reduces piston crown temperature for longer life. 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 housings for safety.

COOLING SYSTEM - Keel cooled with heat exchanger optional. Cast expansion tank. Two thermostats for quick warm-ups and safety. Cast-iron exhaust manifold for reliable temperature control.

DC ELECTRICAL SYSTEM - Negative ground, 12 volt DC system includes starter motor and alternator with regulator. Low oil pressure and high coolant temperature safety shutdown system. 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 110°/50° heat rise ratings. 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 frequency control with ECU electronic governor.

US EPA Tier III Compliant

SPECIFICATIONS AND DIMENSIONS

AC Output*	
60 Hz, 1800 RPM* kW	**65 kW**
Voltage regulation	1%
Frequency droop control	Isochronous 0%
Standard three phase power factor	0.8
Optional single phase power factor	1.0
Generator full load temperature rise (at 50°C ambient)	110°C
Inline cylinders/aspiration	I-4 / Turbocharged
Displacement - cid (liter)	276 (4.5)
Bore/stroke - inches (mm)	4.17/5 (106/127)
Fuel injection pump type and control	Electronic (HPCR)
Oil fill capacity - gal (ltr)	4 (15)
Cooling System (Keel cooling standard, heat exchanger optional)	
Heat rejection to jacket water -1800 rpm BTU min	4,548
Freshwater pump capacity - 1800 rpm/gpm (lpm)	30.9 (117)
Approximate cooling capacity - gal (ltr)	4.5 (17)
KC connection size in/out - inch	1.5
Heat exchanger approx. cooling capacity - gal (ltr)	3.7 (14)
Seawater pump capacity - 1800 rpm/gpm(lpm)	24 (91)
Max seawater pump suction head lift - ft (m)	10 (3)
Sea water pump inlet hose ID - in (mm)	1.25 (32)
Min. seawater inlet/discharge thru-hull - in (mm)	1.25 (32)
DC Electrical (12V standard, 24V optional)	
DC starting voltage - standard (optional)	12 (24)
Min battery capacity - amp hr/12V CCA (24V CCA)	200/625 (500)
Starter rolling amps @ 0°C - 12VDC (24VDC)	920 (600)
12 Volt battery cable size up to 10 ft (3m)	2/0

Air	
Air consumption - 1800 rpm/cfm (m^3/m)	215 (6.1)
Approx heat radiated to air - 1800 rpm/BTU/min	596
Generator cooling air flow 1&3Ø - 1800 rpm cfm	595
Exhaust gas volume - 1800 rpm/cfm (m^3/m)	521 (14.7)
Exhaust gas temp - 1800 rpm/F° (C°)	846 (452)
Max. exhaust back Pressure - inch H^2O (mm H^2O)	30 (762)
Wet and exhaust elbow OD- in (mm)	4 (102)
Fuel	
Fuel injection pump type and control	HPCR
Min suction - in (mm)	3/8 (10)
Min return line - in (mm)	1/4 (6)
Max fuel transfer pump suction lift - in (mm)	80 (2032)
Max fuel flow to transfer pump at 1800 rpm - gph	19.5
Specific fuel consumption max load 1800 rpm - lbs.hp.hr	0.394
Approx. fuel rate at 1800 RPM full load - gph (lph)**	5.5 (20.8)
Max Engine Operating Angle	
Continuous (with separate expansion tank)	30°
Intermittent (2 minutes)	45°
Dimensions and Weight	
Length - inches (mm)	65 (1652)
Width - inches (mm)	31.7 (805)
Height - inches (mm)	40 (1018)
Weight - pounds (kilograms)	2072 (940)

NOTES:
* Prime kW ratings for 3Ø at 0.8 power factor. Consult factory for deration factors.
** Based on prime kW rating at 1800. Fuel rate may vary depending on operating conditions.

Contact factory representative or www.northern-lights.com for current information.

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