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Legendary Northern Lights features in a 25 kW size.

The M864K combines ample power with features vessel owners have come to expect from Northern Lights into a compact package. Exceptionally clean and quiet, it makes life aboard comfortable while providing the confidence that comes with owning a Northern Lights.

The Luger engine features indirect fuel injection for cleaner exhaust and quiet operation. A cupro-nickel heat exchanger element and gear-driven seawater pump are just two of the many built-in features ensuring the ultimate in reliability.

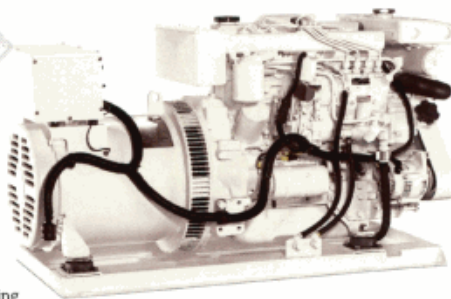
Reliability is only one demand on today's generator sets. Noise must be kept to a minimum. M864K noise is reduced at the design stage with several features. A double-wall oil pan and an isolated rocker arm cover contain the noise at its source. A noise maze

The service side (shown) provides immediate access to vital maintenance points while the opposite non-service side can be mounted facing a bulkhead to free up engine room space.

air intake silencer limits the broadcast of noise while captive isolation mounts limit transmission of vibration to the rest of the vessel.

The K-series brushless generator end was designed to handle challenging loads such as electric motor starting with ease. The rotor, exciter and stator are coated in epoxy for protection against the corrosive marine environment. The hand-wound stator is skewed, making electricity with a symmetrical wave form that today's electrical equipment demands. An automatic voltage regulator (AVR) regulates voltage to within $\pm 1\%$. Class H insulation, low 90° Celsius heat rise and high copper content are further signs of quality.

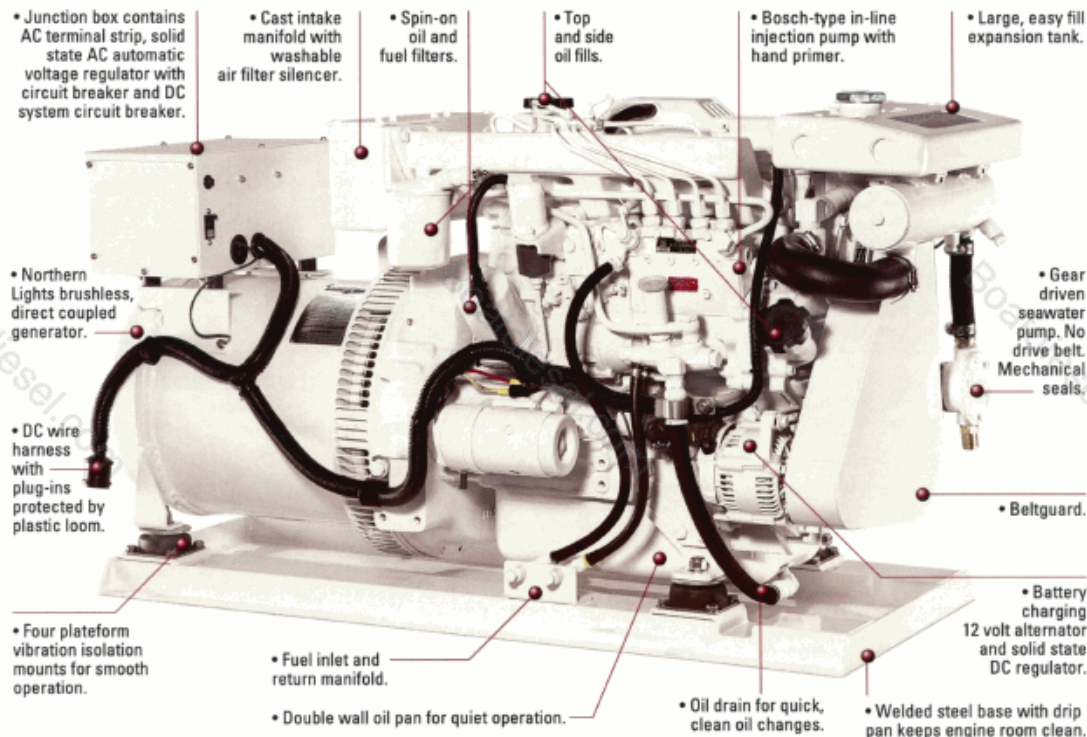
Single side servicing, spin-on oil and fuel filters, an easily accessed air filter and



Northern Lights' unique DC relay logic system make routine maintenance simple and fast.

The M864K is built to accommodate a front PTO, making it possible to utilize up to 37 HP for powering hydraulic accessories such as bow thrusters, roller furling, anchor winches and other deck gear.

Like all Northern Lights generator sets, the M864K has plug-in wire harnesses, VDO instruments and is painted with gleaming white polyurethane for a tough, long-lasting finish.



M864K Specifications

AC Output¹

25 kW	60 Hz, 1800 RPM, 1 Ph, 1.0 PF, 120-240 V/104 A, 120 V/208 A
20 kW	50 Hz, 1500 RPM, 1 Ph, 1.0 PF, 220 V/90.9 A

Voltage regulation $\pm 1\%$

Engine

Type	Vertical inline 4 cylinder diesel
Displacement	152 c.i.d. (2.49 ltr)
Bore/Stroke	3.40/4.20 in (86/107mm)
HP @ 1800 RPM	39.4
Approx. fuel use @ full load ²	2.30 gph (8.7 lph)
@ half load ²	1.21 gph (4.6 lph)

Installation Data

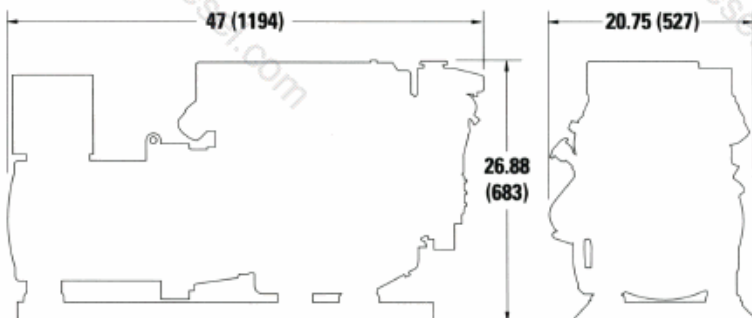
Wet exhaust elbow	3" (51mm) OD
Raw water inlets	0.75" (20mm) OD
Fuel inlet and return	1/4" NPT
Coolant capacity (HE)	2.2 gal (8.3 ltr)
Oil capacity	7.8 qts (7.4 ltr)

Weight

Approx. dry weight	965 lbs (438 kg)
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1. Based on SAE J1995 and ISO 3046. 2. Actual fuel consumption will vary depending on operating conditions.

Dimensional Data



Main dimensions given in inches (mm). Dimensions subject to change without notice.

M864K Features and Benefits

Engine Block

- Lugger, four cycle, 4 cylinder liquid cooled, naturally aspirated, overhead valve marine diesel based on an industrial engine block.
- Crankshaft is induction hardened, forged carbon steel; stronger than cast iron.
- Eight point balancing for smoothness.
- Helical cut and ground, carbon steel timing and PTO gears reduce noise.
- Cross flow head for efficient breathing.
- Sandwich oil pan reduces noise.

Cooling System

- Freshwater cooling system in heat exchanger or keel cooled configuration.
- Large, easy fill expansion tank.
- Cast iron exhaust manifold is freshwater cooled for safety. No hot, dry risers.
- Zinc anode electrolysis protection.
- Heat exchanger cooling includes: Easy to clean tube-type heat exchanger. Raw water pump of bronze and stainless steel is accessible.
- Gear driven pump requires no drive belts.

Fuel System

- Fuel system is self-venting.
- Bosch-type in-line injection pump with 5% mechanical governor for close AC output frequency control.
- Pintle-type injectors. Replaceable tips.
- Mechanical fuel lift pump with hand primer.
- Large spin-on fuel filter.
- Flexible fuel lines routed to base.
- Stop solenoid controls fuel rack, not throttle, for fast engine shutdowns.

Lubrication System

- Full flow, spin-on oil filter with bypass.
- Large capacity oil pan.
- Lube oil drain for quick oil changes.

DC Electrical System

- 12 volt starter and battery charging alternator with regulator.
- Standard panel: Remote mount S-3C with gauges for oil pressure, water temperature, hours and DC voltage.
- Optional: S-4 panel has engine instruments plus AC meters.
- 20 ft plug-in panel harness lets you monitor your set from the bridge. Better than unit mount panels that are prone to vibration problems. Harness extensions and Y's for multi-panel systems are available.
- For safety, low oil pressure, high water temperature and high exhaust temperature shutdowns are standard.



AC Generator

- Northern Lights direct coupled, brushless AC generator is maintenance free.
- 4 lead/1 phase for 50 or 60 hertz AC power output is standard. 12 lead/3 phase generator available.
- Generator features: high quality Class H insulation, accessible diodes, oversized bearings and junction box for AC wiring connections.
- Automatic voltage regulator gives quick

response to load changes. Voltage regulated to $\pm 1\%$ RMS no load to full load.

Classification Standards

- The M864K is built to major classification society standards. Consult factory for details.



Special Equipment

- Steel base frame with drip pan.
- Vibration isolation mounts for smooth, quiet operation.
- Closed circuit crankcase vent recycles oil vapors for a cleaner engine room.
- Belt guard standard.
- White polyurethane paint.
- Parts and operator's manuals.



PTO Versatility

- Optional B-spline 2 or 4 bolt, front power take-off with 12 or 24 volt electric clutch. Take up to 37 hp to run your bow thruster, sail handling, deck winches and other shipboard hydraulic equipment.

Optional Sound Enclosure

Maximize your onboard comfort. Powder coated marine aluminum panels lined with foam deaden noise yet allow service access.



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