

## Specifications and Dimensions

AC Output <sup>1</sup>	
<b>12 kW</b>	60 Hz, 1800 RPM, 1 Ph, 1.0 PF, 120-240 V/50A, 120 V/100A
<b>10 kW</b>	50 Hz, 1500 RPM, 1 Ph, 1.0 PF, 220 V/45.4 A
Optional	Three Phase with 0.8 PF
Voltage regulation	±1%

1. Based on SAE J1995 and ISO 3046.

Weight and Height	
Approximate dry weight	837 lbs (380 kg)
Length	39.4 in (1000 mm)
Width	22.8 in (580 mm)
Height	25.2 in (641 mm)
Sound enclosure weight	75 lbs (34 kg)
Enclosure length	39.4 in (1000 mm)
Enclosure width	22.8 in (580 mm)
Enclosure height	25.7 in (654 mm)

Engine Data	
Type	Vertical inline 3 cylinder diesel
Displacement	91 in <sup>3</sup> (1.5 ltr)
Bore/Stroke	3.30/3.50 in (84/90 mm)
HP @ RPM	20/1800 17/1500
Approximate fuel use <sup>2</sup> :	
1800 RPM @ full load	1.20 gph (4.50 lph)
1800 RPM @ half load	0.62 gph (2.30 lph)
1500 RPM @ full load	1.00 gph (3.78 lph)
1500 RPM @ half load	0.51 gph (1.93 lph)

2. Actual fuel consumption will vary depending on operating conditions.

Installation Data	
Wet exhaust elbow	2 inch (51 mm) OD
Raw water inlet	3/4 inch (19 mm) OD
Fuel inlet and return	1/4 inch NPT

## Features and Benefits

**Engine Block** - Four cycle, 3 cylinder, liquid cooled, naturally aspirated, overhead valve diesel with glow plugs for quick starting. Swirl combustion chambers improve fuel efficiency and reduce smoke.

**Cooling System** - Standard heat exchanger cooling with optional keel cooling. Cupro-nickel, tube-type heat exchanger has removable ends for easy cleaning. Rubber impeller. Bronze and stainless steel seawater pump is gear driven eliminating a potential fail point.

**Fuel System** - The self-venting fuel system features an injection pump with 5% mechanical governor for close AC frequency control and pintle injectors with replaceable tips. Stop solenoid acts directly on the fuel rack eliminating linkage problems. The fuel pump is mechanical with a hand primer, eliminating electronic pump failures.

**Intake and Exhaust** - The M843NW3 meets and exceeds US EPA Tier III emission. Its cast aluminum intake manifold reduces intake noise and its washable air cleaner makes routine maintenance simple. The wet exhaust elbow is cast iron for safety.

### Lubrication System -

The closed crankcase vent system traps oil vapor and keeps engine room clean. 4.2 qt (4 ltr) oil capacity for better lubrication and 200 hour oil change intervals.

• DC system uses **reliable relays** instead of an unrepairable printed circuit board.

### Design Features -

Integrated unit features base with drip pan and platform mounts to isolate vibration.

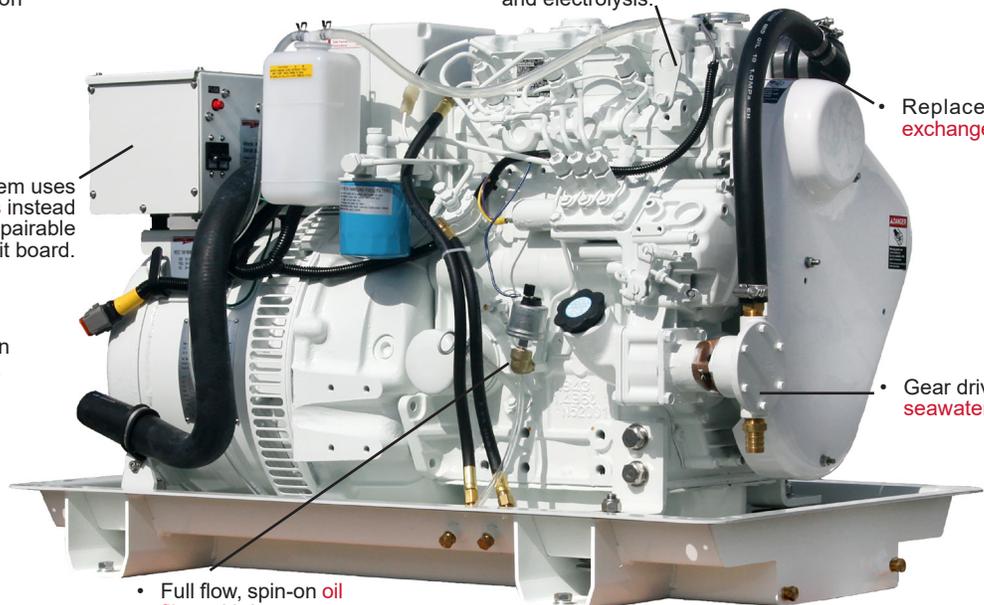
**DC Electrical System** - The DC System is powered by a 12 volt starter motor and battery charging alternator with belt guard. The set is equipped with a standard S-1B remote mount control panel, featuring an hour meter, stop-start switch with run light and a preheat switch. The standard panel can expand to six panels up to 110 feet from the set, while the 20 foot (6m) plug-in panel harness lets you mount your panel anywhere onboard. Low oil pressure, high coolant temp and high exhaust temp safety shutdowns standard.

**AC Generator** - The Northern Lights, direct coupled, four pole, revolving field, four lead re-connectable generator has Class "H" insulation and a pre-lubricated bearing and features a conservative heat rise rating: 95°C/50°C ambient. Our external automatic voltage regulator gives you ±5% voltage regulation and is powered by a dedicated AC winding for improved motor starting. The AVR is protected by a dedicated circuit breaker. The 30 amp mainline circuit breaker protects generator from AC overloads and shorts.

- One-piece **heat exchanger, expansion tank** and liquid cooled **exhaust manifold**. Cast iron to resist corrosion and electrolysis.

• Replaceable **heat exchanger element**.

• Gear driven **seawater pump**.



- Full flow, spin-on oil **filter** with bypass.



[www.northern-lights.com](http://www.northern-lights.com)

Dealer

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