

**Dimensional Drawing**
**M864W3 - 25 kW/20 kW**
**AC Output<sup>1</sup>**

**25 kW** 60 Hz, 1800 RPM, 1 Ph, 1.0 PF,  
120-240 V/104.1 A, 120 V/208.3 A

**20 kW** 50 Hz, 1500 RPM, 1 Ph, 1.0 PF,  
220 V/90.9 A

Optional Three Phase with 0.8 PF  
Voltage regulation ±1%

**Lugger L864 Engine**

Type Vertical inline 4 cylinder diesel  
Displacement 152 in<sup>3</sup> (2.5 ltr)  
Bore/Stroke 3.40/4.20 in (86/107 mm)  
HP @ RPM 39.4/1800 33.0/1500

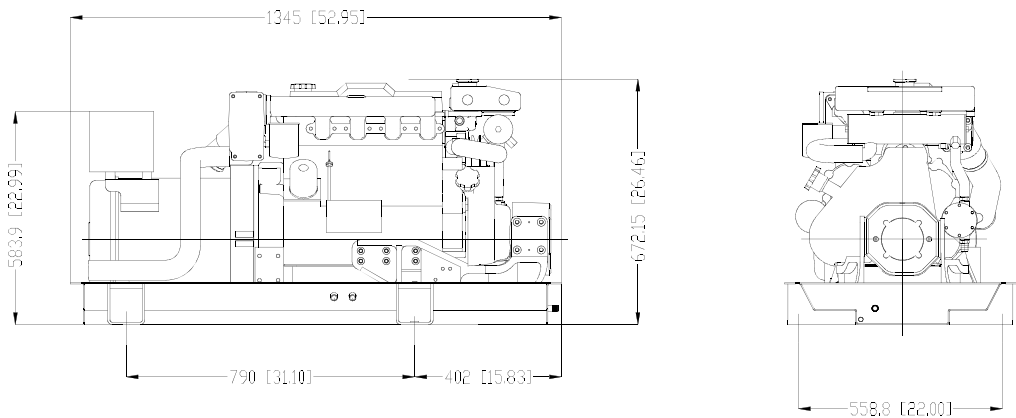
**Approximate fuel use**

1800 RPM @ full load<sup>2</sup> 2.23 gph (8.40 lph)  
1800 RPM @ half load<sup>2</sup> 1.17 gph (4.40 lph)  
1500 RPM @ full load<sup>2</sup> 1.78 gph (6.73 lph)  
1500 RPM @ half load<sup>2</sup> 0.93 gph (3.52 lph)

**Installation Data & Weight**

Wet exhaust elbow 3 inch (76 mm) OD  
Raw water inlet 3/4 inch (19 mm) OD  
Fuel inlet and return 1/4 inch NPT  
Approximate dry weight 993 lbs (450 kg)

1. Based on SAE J1995 and ISO 3046.  
2. Actual fuel consumption will vary depending on operating conditions



**M864W3 Overall Dimensions L x W x H: 52.9 x 24.2 x 26.5 inch (1350 x 696 x 672 mm)**  
**Sound Enclosure Dimensions L x W x H: 52.9 x 24.2 x 27.7 inch (1350 x 696 x 703 mm)**  
**Sound Enclosure Weight: 140 lbs. (64 kg)**

Dimensions given in inches (mm). Dimensions subject to change without notice.  
Contact dealer or visit [www.northern-lights.com](http://www.northern-lights.com) for most current installation drawings.

**M864W3 Features and Benefits**
**Engine Block**

- Four cycle, 4 cylinder, liquid cooled, naturally aspirated, overhead valve diesel.
- Induction hardened crankshaft. Forged carbon steel - stronger than cast iron.
- Helical cut and ground, carbon steel timing and PTO gears reduce noise.
- Cross flow head for efficient breathing. Glow plugs for quick cold starting.

**Cooling System**

- Freshwater cooling system in heat exchanger or keel cooled configuration.
- Large, easy-fill single-piece exhaust manifold is freshwater cooled for safety. No hot, dry risers. Fewer troublesome hoses and gaskets. Cast iron to resist corrosion and electrolysis.
- Zinc anode electrolysis protection.
- Heat exchanger cooling is standard. Cupro-nickel tube-type heat exchanger has removable ends for easy cleaning. Rubber impeller seawater pump of bronze and stainless steel is gear driven; no belt.

**Fuel System**

- Fuel system is self-venting.
- Bosch-type in-line injection pump with 5% mechanical governor for close AC frequency control.
- Pintle injectors with replaceable tips.
- Mechanical lift pump with hand primer. No electric pump to fail.
- Large spin-on fuel filter.
- Flexible fuel lines routed to base.
- Stop solenoid controls the fuel rack, not the throttle, to eliminate speed variances and linkage problems.

**Intake and Exhaust**

- Meets US EPA Tier III emission standards at date of manufacture.
- Washable air cleaner in cast intake manifold reduces intake noise.
- Cast iron, wet exhaust elbow for safety.

**Lubrication System**

- Full flow, spin-on oil filter with bypass.
- 6.9 qt (6.5 ltr) oil capacity for better lubrication. 200 hour oil change intervals.
- Oil drain for quick, clean oil changes.
- Closed crankcase vent system traps oil vapor and keeps engine room clean.

**DC Electrical System**

- DC system uses reliable relays instead of an unrepairable printed circuit board.
- 12 volt starter motor and battery charging alternator with regulator and belt guard.
- Standard panel: Remote mount S-3C has hour meter, stop-start switch with run light and preheat switch. Gauges for oil pressure, coolant temp and DC voltage. Safety shutdowns for low oil pressure, high coolant temp and high exhaust temp.
- Expandable to six panels up to 110 feet from the set.
- 20 foot (6m) plug-in panel harness lets you mount your panel anywhere onboard.

**AC Generator**

- Northern Lights, direct coupled, brushless AC generator is maintenance free. 4 lead, 1 phase, 50 or 60 Hz output standard. 12 lead, 3 phase optional. Conservative heat rise rating: 95°C/50°C ambient.
- Automatic voltage regulator (AVR) is powered by dedicated AC winding for true 300% short circuit capability and circuit breaker protection. Quick ±1% RMS no load to full load voltage regulation.
- Generator features high quality, Class "H" epoxy insulation, accessible diodes, over-sized bearings and junction box for wiring.

**Special Equipment**

- Welded steel base frame with drip pan.
- Four platform mounts isolate vibration.
- White, long-life polyurethane paint.
- Operator's and parts manuals standard.

**Classification Standards**

- Consult factory for details.



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

**Dealer**

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Information and dimensions subject to change without notice.

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