NORTHERN LIGHTS

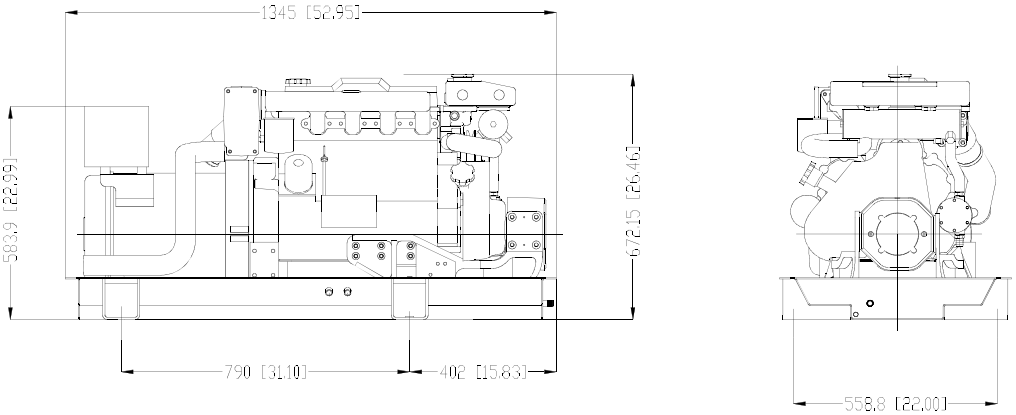
M864W3 Specifications and Dimensions

M864W3 - 25 kW/20 kW

AC Output[1]	
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 in³ (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[2]	2.23 gph (8.40 lph)
1800 RPM @ half load[2]	1.17 gph (4.40 lph)
1500 RPM @ full load[2]	1.78 gph (6.73 lph)
1500 RPM @ half load[2]	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

Dimensional Drawing



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 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 maintence free. 4 lead, 1 phase, 50 or 60 Hz output standard. 12 lead, 3 phase optional. Conservative heat rise rating: 95ºC/50ºC 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 plateform mounts isolate vibration.
- White, long-life polyurethane paint.
- Operator’s and parts manuals standard.

Classification Standards

- Consult factory for details.

TYPE APPROVED

www.northern-lights.com

Dealer

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