

## FEATURES AND BENEFITS

**ENGINE BLOCK** - Four cycle, 4 cylinder, liquid cooled, naturally aspirated overhead valve diesel. Swirl combustion chambers provide fuel efficiency and reduce smoke. Glow plugs for quick cold starting.

**COOLING SYSTEM** - Jacket-water cooling system in standard keel cooled or optional heat exchanger configuration. One-piece heat exchanger housing, expansion tank and liquid cooled exhaust manifold. Fewer troublesome hoses and gaskets. Cast iron to resist corrosion and electrolysis. Easily accessible, rubber impeller seawater pump of bronze and stainless steel is gear driven; no pump drive belts to fail. Cast-iron wet exhaust elbow is included.

**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 speed variances and linkage problems. Mechanical fuel pump with hand primer eliminates electronic pump failures.

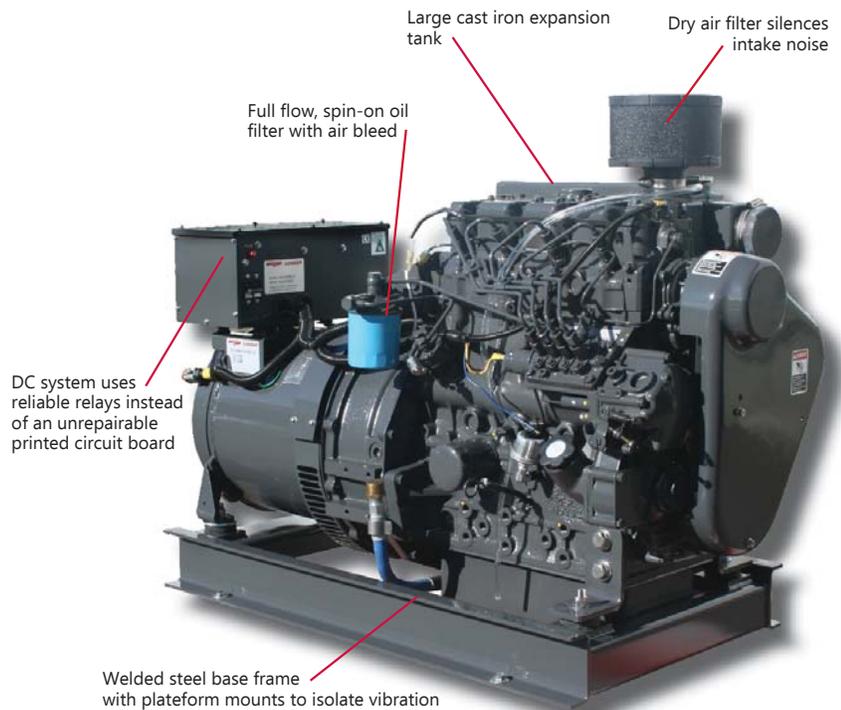
**INTAKE AND EXHAUST** - The M20CRW3 meets US EPA Tier III emission standards. It features a disposable dry air cleaner and 1-1/2 inch NPT exhaust outlet.

### LUBRICATION SYSTEM -

The closed crankcase vent system traps oil vapor and keeps engine room clean. 8.6 qt (8.2 ltr) oil capacity for better lubrication and 200 hour oil change intervals. Oil drain for quick, clean oil changes. Full flow, spin-on oil filter with air bleed.

**DC ELECTRICAL SYSTEM** - The DC System uses reliable relays instead of an unrepairable printed circuit board. It is powered by a 12 volt starter motor and battery charging alternator with regulator and belt guard. The set is equipped with a standard S-3C remote mount control panel, featuring an hour meter, volt meter, stop-start switch with run light and a preheat switch. Gauges include oil pressure, coolant temperature and DC voltage. 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 of 95°C/50°C ambient.



## SPECIFICATIONS AND DIMENSIONS

### AC Output<sup>1</sup>

<b>20 kW</b>	60 Hz, 1800 RPM
Voltage/Amperage	120-240V / 83 A, 120V / 166 A
Phase/power factor	Std: 1/1.0 (Opt. 3/0.8)
Voltage regulation	±1%

1. Based on SAE J1995 and ISO 3046.

### Engine Data

Type	Vertical inline 4 cylinder diesel
Displacement	135 in <sup>3</sup> (2.2 ltr)
Bore/Stroke	3.30/3.90 in (84/100 mm)
HP @ RPM	32/1800
Approx. fuel use	
1800 RPM @ full load <sup>2</sup>	1.7 gph (6.5 lph)
1800 RPM @ half load <sup>2</sup>	1.0 gph (3.9 lph)

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

### Installation Data

Wet exhaust elbow	2 inch OD
Dry exhaust outlet	1 1/2 inch NPT
HE raw water inlet	3/4 inch (19 mm) OD
KC coolant inlet / outlet	1 1/4 inch OD
Keel Cooler	6 ft turbo tube /12 ft plain tube
Fuel inlet	5/16 inch JIC male
Fuel return	1/4 inch JIC male

### Weight and Height

Approximate dry weight	820 lbs (372 kg)
Length	43.2.0 in (1098 mm)
Width	20.7 in (526 mm)
Height	32.8 in (833 mm)