

#### **ENGINE BLOCK**

- Six cylinder, four cycle, in-line, liquid cooled, overhead valve, marine diesels based on heavy-duty industrial engine blocks.
- · Balanced, forged crankshaft with induction hardened journals and rolled fillets for long life.
- Replaceable, wet cylinder liners for long life and low rebuild costs.
- · Bimetallic valves with chrome stems and rotators.
- Replaceable valve seats and guides.
- Three ring aluminum alloy pistons with Ni-Resist insert for the top ring. Keystone piston ring reduces carbon buildup under light loads.
- Torsional crankshaft dampers help ensure smooth
- A single poly-vee drive belt powers the alternator and jacket-water pump.

#### **FUEL SYSTEM**

- · High pressure common rail fuel injection for smooth, clean delivery.
- · Direct fuel injection systems
- Ring clamp fuel filters with air bleed and drain.
- Electric fuel pump integrated into primary fuel filter. Computer controlled priming for ease of operation.

### **LUBRICATION SYSTEM**

- · Positive displacement gear-type oil pump.
- Full flow, spin-on oil filter.
- Jacket-water, plate-type, full flow oil cooler reduces heat and prevents lube oil breakdown.
- · Large capacity oil pan.
- A closed loop crankcase vent traps oil vapor to keep the engine room clean.

#### **AIR SYSTEM**

- Dry air filter silences intake noise.
- Turbocharger with jacket water cooled turbine housings
- · Jacket water aftercooler provides optimized combustion and output.

## **COOLING SYSTEM**

- Heat exchanger cooled.
- · Gear driven sea water pump with flexible impeller made of bronze and stainless steel.
- Cast iron expansion tank with brass filler neck.
- Two thermostats for quick warm-ups and safety.
- · Cast-iron exhaust manifold for reliable temperature

## **ESP AND DC ELECTRICAL SYSTEM**

- Negative ground, 12 volt DC system has circuit breaker, starter motor and alternator with regulator. Relay board and senders for gauged panels standard.
- · Standard S-3B remote control panel with engine hour meter, coolant temperature gauge, oil pressure gauge, DC voltage meter, start-stop and shutdown bypass switches. Additional optional panels help you specify the amount and type of information delivered.
- · Low oil pressure and high coolant temperature safety shutdown system.

## AC GENERATOR

- Direct coupled, single bearing, 12 lead, reconnectable AC generator. Maintenance free brushless design.
- All NL generators meet or exceed class society standards with Class "H" insulation, accessible diodes, oversized ball bearings, marine grade shafts and conservative 90°/50° heat rise ratings.
- Engines and generators are torsionally matched for long
- $\bullet$  Automatic voltage regulator;  $^{\pm}0.5\%$  regulation over the entire range from no load to full load.
- Configured for isochronous operation with integral electronic governor control supplied by ECU. Frequency droop available upon request.

## SPECIAL EQUIPMENT

- US EPA Tier III compliant (60 Hz).
- IMO Tier 2 compliant (50 Hz).
- · Welded steel base frame
- Belt guard
- Hydrolastic vibration isolation mounts
- Sparkling white IMRON® polyurethane paint
- Operator's and parts manuals

# M150A13 FEATURES AND BENEFITS

60 Hz, 1500 RPM kW         150 kW           O Hz, 1500 RPM kW         125 kW           Voltage regulation         +/- 0.5%           Frequency droop control         Isochronous, 0.5 Hz, 1.7 Hz, 3.0 Hz           Phase and power factor         Three phase 0.8 power factor std.           Generator full load temperature rise         90°C temperature rise at 50°C ambient           Lugger Diesel Engine Data         1.16 / Turbo & After-cooled / 4           Displacement - cid (liter)         4.14 (6.8)           Bore/stroke - inches (mm)         4.19/5 (106/127)           Fuel injection pump type and control         Electronic (HPCR)           Cooling System (Heat exchanger cooled)         60 Hz         50 Hz           Cooling System (Heat exchanger cooled)         60 Hz         50 Hz           Heat rejection to jacket water - BTU min         10,473         8,498           Freshwater pump capacity - gm (lpm)         46 (173)         33 (124.9)           Alea trajection to jacket water - BTU min         9.0 (34)         9.0 (34)           Seawater pump Elow - gpm (lpm)         46 (173)         33 (124.9)           Max seawater pump seution head lift - ft (m)         9.8 (3)         9.8 (3)           Sea water pump inlet hose ID - in (mm)         2.0 (51)         2.0 (51)           DC Starting voltage - stan	AC Output *		
Voltage regulation	60 Hz, 1800 RPM kW	150 kW	
Frequency droop control   Isochronous, 0.5 Hz, 1.7 Hz, 3.0 Hz   Phase and power factor   Three phase 0.8 power factor std.   Generator full load temperature rise	50 Hz, 1500 RPM kW	125 kW	
Phase and power factor	Voltage regulation	+/- 0.5%	
Generator full load temperature rise  Lugger Diesel Engine Data  Linine cylinders/aspiration/operating cycle  Displacement - cid (liter)  Bore/stroke - inches (mm)  A1.975 (106/127)  Fuel injection pump type and control  Cooling System (Heat exchanger cooled)  Cooling System (Heat exchanger cooled)  Heat rejection to jacket water - BTU min  Freshwater pump capacity - gm (lpm)  Approximate cooling capacity - gm (lpm)  As seawater Pump Flow - gpm (lpm)  Max seawater pump suction head lift - ft (m)  Sea water pump inlet hose ID - in (mm)  DC starting voltage - standard (optional)  Min battery capacity - 12V CCA (24V CCA)  Starter rolling amps @ 0°C - 12VDC (24VDC)  12 Volt battery cable size up to 10 ft (3m)  Approx heat radiated to air - BTU/min  Approx heat radiated to air - BTU/mi	Frequency droop control	Isochronous, 0.5 Hz, 1.7 Hz, 3.0 Hz	
Lugger Diesel Engine Data         Inline cylinders/aspiration/operating cycle         I-6 / Turbo & Aftercooled / 4           Displacement - cid (liter)         414 (6.8)           Bore/stroke - inches (mm)         4.19/5 (106/127)           Fuel injection pump type and control         Electronic (HPCR)           Cooling System (Heat exchanger cooled)         60 Hz         50 Hz           Heat rejection to jacket water - BTU min         10.473         8,498           Freshwater pump capacity - gm (lpm)         51.2 (194)         42.4 (161)           Approximate cooling capacity - gal (lir)         9.0 (34)         9.0 (24)           Seawater pump Flow - gm(lpm)         46 (173)         33 (124.9)           Max seawater pump suction head lift - ft (m)         9.8 (3)         9.8 (3)           Sea water pump inler hose ID - in (mm)         2.0 (51)         2.0 (51)           Min. seawater inlet/discharge thru-hull - in (mm)         2.0 (51)         2.0 (51)           DC Starting voltage - standard (optional)         12 (24)           Min battery capacity - 12V CCA (24V CCA)         925 (625)           Starter rolling amps @ 0°C - 12VDC (24VDC)         920 (600)           12 Volt battery cable size up to 10 ft (3m)         000           Air consumption - cfm (m³/m)         1,100(31)         915 (26)           Exhaust g	Phase and power factor	Three phase 0.8 power factor std.	
Inline cylinders/aspiration/operating cycle Displacement - cid (liter) Displacement - cid (liter) A14 (6.8) Bore/stroke - inches (mm) Fuel injection pump type and control Electronic (HPCR) Cooling System (Heat exchanger cooled) Heat rejection to jacket water - BTU min 10,473 Ry98 Freshwater pump capacity - gm (lym) Approximate cooling capacity - gm (lym) Approximate cooling capacity - gal (ltr) Approximate cooling capacity - gal (ltr) Approximate r pump proper yem (lym) Asseawater Pump Flow - gm(lym) Asseawater pump suction head lift - ft (m) Asseawater pump inlet hose ID - in (mm) 2.0 (51) 2.0 (51) DC Electrical (12v standard, 24v optional) DC Starting voltage - standard (optional) DC Starting voltage - standard (optional) Alir colonia gmsp @ 0°C - 12vDc (24vDC) 2920 (600) Air Air consumption - cfm (m³/m) Approx heat radiated to air - BTU/min Approx heat radiated to air - BTU/min Cenerator cooling air flow 1 8 3 0 - cfm (m³/m) 1,123 (32) Exhaust gas volume - cfm (m³/m) Asseawate glow Or in (mm) 4 (102) 4 (102) Fetule waxes the bow OD- in (mm) 5 (127) 5 (127) Dry exhaust elbow in (mm) 4 (102) Fuel Fuel injection pump type and control High Pressure Common Rail Min suction - in (mm) Asseauder in (mm)	Generator full load temperature rise	90°C temperature rise at 50°C ambient	
Displacement - cid (liter)	Lugger Diesel Engine Data		
Bore/stroke - inches (mm)	Inline cylinders/aspiration/operating cycle	I-6 / Turbo & Aftercooled / 4	
Fuel injection pump type and control   Electronic (HPCR)	Displacement - cid (liter)	414 (6.8)	
Cooling System (Heat exchanger cooled)         60 Hz         50 Hz           Heat rejection to jacket water - BTU min         10,473         8,498           Freshwater pump capacity - gpm (lpm)         51,2 (194)         42,4 (161)           Approximate cooling capacity - gal (ltr)         9,0 (34)         9,0 (34)           Seawater Pump Flow - gpm(lpm)         46 (173)         33 (124.9)           Max seawater pump suction head lift - ft (m)         9,8 (3)         9,8 (3)           Sea water pump inlet hose ID - in (mm)         2,0 (51)         2,0 (51)           Min seawater inlet/discharge thru-hull - in (mm)         2,0 (51)         2,0 (51)           DC Starting voltage - standard (optional)         12 (24)         12 (24)           Min battery capacity - 12V CCA (24V CCA)         925 (625)         Starter rolling amps @ 0°C - 12VDC (24VDC)         920 (600)           12 Volt battery cable size up to 10 ft (3m)         000         100         100           Air consumption - cfm (m²/m)         547 (15.5)         353 (10.0)         Approx heat radiated to air - BTU/min         2,040         1,700           Generator cooling air flow 1 & 3 Ø - cfm (m²/m)         1,100(31)         915 (26)         Exhaust gas volume - cfm (m³/m)         1,123 (32)         828 (23)           Exhaust gas volume - cfm (m³/m)         1,123 (32)         828	Bore/stroke - inches (mm)	4.19/5 (106/127)	
Heat rejection to jacket water - BTU min	Fuel injection pump type and control	Electronic (HPCR)	
Freshwater pump capacity - gpm (lpm)	Cooling System (Heat exchanger cooled)	60 Hz	50 Hz
Approximate cooling capacity - gal (litr) 9.0 (34) 9.0 (34)  Seawater Pump Flow - gpm(lpm) 46 (173) 33 (124.9)  Max seawater pump suction head lift - ft (m) 9.8 (3) 9.8 (3)  Sea water pump inlet hose ID - in (mm) 2.0 (51) 2.0 (51)  Min. seawater inlet/discharge thru-hull - in (mm) 2.0 (51) 2.0 (51)  DC Electrical (12V standard, 24V optional)  DC starting voltage - standard (optional) 12 (24)  Min battery capacity - 12V CCA (24V CCA) 925 (625)  Starter rolling amps @ 0°C - 12VDC (24VDC) 920 (600)  12 Volt battery cable size up to 10 ft (3m) 000  Air 60 Hz 50 Hz  Air consumption - cfm (m³/m) 547 (15.5) 353 (10.0)  Approx heat radiated to air - BTU/min 2,040 1,700  Generator cooling air flow 1 & 3 Ø - cfm (m³/m) 1,100(31) 915 (26)  Exhaust gas volume - cfm (m³/m) 1,103 (32) 828 (23)  Exhaust gas volume - cfm (m³/m) 1,103 (373) 849 (454)  Max. exhaust back pressure - inch H²O (mm H²O) 30 (762) 30 (762)  Wet exhaust elbow OD- in (mm) 5 (127) 5 (127)  Dry exhaust elbow OD- in (mm) 4 (102) 4 (102)  Fuel  Fuel injection pump type and control High Pressure Common Rail  Min suction - in (mm) 0.31 (8)  Min return line - in (mm) 0.31 (8)  Min return line - in (mm) 0.31 (8)  Min return line - in (mm) 0.388  Specific fuel consumption max load 60 hz - lbs/hp-hr 0.363  Approx. fuel rate** at 60 Hz full load - gph (lph) 9.5 (36.1)  Max. Englie Operating Angle  Continuous (with separate expansion tank) 25  Dimensions and Weight 0.90 (2286)  Width - inches (mm) 84.4 (2144) 90.0 (2286)  Width - inches (mm) 39.84 (1012) 42.0 (1067)	Heat rejection to jacket water - BTU min	10,473	8,498
Seawater Pump Flow - gpm(lpm)         46 (173)         33 (124.9)           Max seawater pump suction head lift - ft (m)         9.8 (3)         9.8 (3)           Sea water pump inlet hose ID - in (mm)         2.0 (51)         2.0 (51)           Min. seawater inlet/discharge thru-hull - in (mm)         2.0 (51)         2.0 (51)           DC Electrical (12V standard, 24V optional)           DC Starting voltage - standard (optional)         12 (24)           Min battery capacity - 12V CCA (24V CCA)         925 (625)           Starter rolling amps @ 0°C - 12VDC (24VDC)         920 (600)           12 Volt battery cable size up to 10 ft (3m)         000           Air consumption - cfm (m³/m)         547 (15.5)         353 (10.0)           Approx heat radiated to air - BTU/min         2,040         1,700           Generator cooling air flow 1 & 3 Ø - cfm (m³/m)         1,103 (31)         915 (26)           Exhaust gas volume - cfm (m³/m)         1,123 (32)         828 (23)           Exhaust gas temp - F° (C°)         703 (373)         849 (454)           Max. exhaust back pressure - inch H²O (mm H²O)         30 (762)         30 (762)           Wet exhaust elbow OD- in (mm)         5 (127)         5 (127)           Dry exhaust elbow in (mm)         4 (102)         4 (102)           Fuel <td< td=""><td>Freshwater pump capacity - gpm (lpm)</td><td>51.2 (194)</td><td>42.4 (161)</td></td<>	Freshwater pump capacity - gpm (lpm)	51.2 (194)	42.4 (161)
Max seawater pump suction head liff - ft (m)       9.8 (3)       9.8 (3)         Sea water pump inlet hose ID - in (mm)       2.0 (51)       2.0 (51)         Min. seawater inlet/discharge thru-hull - in (mm)       2.0 (51)       2.0 (51)         DC Electrical (12V standard, 24V optional)       DC       Starting voltage - standard (optional)       12 (24)         Min battery capacity - 12V CCA (24V CCA)       925 (625)       Starter rolling amps @ 0°C - 12VDC (24VDC)       920 (600)         12 Volt battery cable size up to 10 ft (3m)       000       Air       60 Hz       50 Hz         Air consumption - cfm (m³/m)       547 (15.5)       353 (10.0)       Approx heat radiated to air - BTU/min       2,040       1,700         Generator cooling air flow 1 & 3 Ø - cfm (m³/m)       1,100(31)       915 (26)         Exhaust gas volume - cfm (m³/m)       1,123 (32)       828 (23)         Exhaust gas temp - F° (C°)       703 (373)       849 (454)         Max. exhaust back pressure - inch H²O (mm H²O)       30 (762)       30 (762)         Wet exhaust elbow (Dr. in (mm)       5 (127)       5 (127)         Dry exhaust elbow in (mm)       4 (102)       4 (102)         Fuel injection pump type and control       High Pressure Common Rail         Min suction - in (mm)       0.31 (8)         Min s	Approximate cooling capacity - gal (ltr)	9.0 (34)	9.0 (34)
Sea water pump inlet hose ID - in (mm)	Seawater Pump Flow - gpm(lpm)	46 (173)	33 (124.9)
Min. seawater inlet/discharge thru-hull - in (mm)  DC Electrical (12V standard, 24V optional)  DC starting voltage - standard (optional)  Min battery capacity - 12V CCA (24V CCA)  925 (625)  Starter rolling amps @ 0°C - 12VDC (24VDC)  12 Volt battery cable size up to 10 ft (3m)  Air  60 Hz  50 Hz  Air consumption - cfm (m³/m)  Approx heat radiated to air - BTU/min  Generator cooling air flow 1 & 3 Ø - cfm (m³/m)  Exhaust gas volume - cfm (m³/m)  Ax:  Aix as you we - cfm (m³/m)  1,100(31)  Exhaust gas temp - F° (C°)  703 (373)  May 6454)  Max. exhaust back pressure - inch H²O (mm H²O)  Dry exhaust elbow OD- in (mm)  5 (127)  5 (127)  Dry exhaust elbow in (mm)  4 (102)  Fuel  Min suction - in (mm)  0,31 (8)  Min return line - in (mm)  Max fuel flow to transfer pump - gph  Aya fuel frow to transfer pump and load 60 hz - lbs/hp-hr  Approx. fuel rate** at 60 Hz full load - gph (lph)  Approx. fuel rate** at 60 Hz full load - gph (lph)  Max Engine Operating Angle  Continuous (with separate expansion tank)  Den genset w/ enclosure  Length - inches (mm)  84.4 (2144)  9.0.0 (2286)  Width - inches (mm)  42.0 (1067)  Height - inches (mm)  84.4 (2144)  9.0.0 (2286)  Width - inches (mm)  84.4 (21012)  42.0 (1067)	Max seawater pump suction head lift - ft (m)	9.8 (3)	9.8 (3)
DC Electrical (12V standard, 24V optional)         DC starting voltage - standard (optional)       12 (24)         Min battery capacity - 12V CCA (24V CCA)       925 (625)         Starter rolling amps @ 0°C - 12VDC (24VDC)       920 (600)         12 Volt battery cable size up to 10 ft (3m)       000         Air       60 Hz       50 Hz         Air consumption - cfm (m³/m)       547 (15.5)       353 (10.0)         Approx heat radiated to air - BTU/min       2,040       1,700         Generator cooling air flow 1 & 3 Ø - cfm (m³/m)       1,100(31)       915 (26)         Exhaust gas volume - cfm (m³/m)       1,123 (32)       828 (23)         Exhaust gas temp - F° (C°)       703 (373)       849 (454)         Max. exhaust back pressure - inch H²O (mm H²O)       30 (762)       30 (762)         Mex exhaust elbow in (mm)       5 (127)       5 (127)         Dry exhaust elbow in (mm)       4 (102)       4 (102)         Fuel injection pump type and control       High Pressure Common Rail         Min suction - in (mm)       0.31 (8)         Max fuel transfer pump suction lift - ft (m)       7.9 (2.4)         Max fuel flow to transfer pump - gph       42.8         Specific fuel consumption max load 60 hz - lbs/hp-hr       0.388         Specific fue	Sea water pump inlet hose ID - in (mm)	2.0 (51)	2.0 (51)
DC starting voltage - standard (optional)  Min battery capacity - 12V CCA (24V CCA)  Starter rolling amps @ 0°C - 12VDC (24VDC)  12 Volt battery cable size up to 10 ft (3m)  Mir  60 Hz  50 Hz  Air consumption - cfm (m³/m)  Approx heat radiated to air - BTU/min  Generator cooling air flow 1 & 3 Ø - cfm (m³/m)  1,100(31)  Exhaust gas volume - cfm (m³/m)  1,123 (32)  Exhaust gas volume - cfm (m³/m)  1,123 (32)  Exhaust gas temp - F° (C°)  703 (373)  May (454)  Max. exhaust back pressure - inch H²O (mm H²O)  Wet exhaust elbow OD- in (mm)  5 (127)  5 (127)  Fuel  Fuel injection pump type and control  High Pressure Common Rail  Min suction - in (mm)  0,31 (8)  Max fuel transfer pump suction lift - ft (m)  Max fuel transfer pump suction lift - ft (m)  Approx. fuel rate** at 60 Hz full load - gph (lph)  Approx. fuel rate** at 50 Hz full load - gph (lph)  Max Engine Operating Angle  Continuous (with separate expansion tank)  Dimensions and Weight  Open genset w/ enclosure  Length - inches (mm)  84.4 (2144)  90.0 (2286)  Width - inches (mm)  9.84 (1012)  42.0 (1067)  Height - inches (mm)  9.95 (661)  925 (6625)  920 (600)  920 (600)  920 (600)  920 (600)  920 (600)  920 (600)  920 (600)  920 (600)  920 (600)  920 (600)  920 (600)  920 (600)  920 (600)  920 (600)  920 (600)  14  400  1,700  1,700  1,700  1,700  1,700  1,700  1,10(31)  915 (26)  1,700  1,20  1,20  1,20  1,20  1,20  1,20  1,20  1,20  1,20  1,20  1,20	Min. seawater inlet/discharge thru-hull - in (mm)	2.0 (51)	2.0 (51)
Min battery capacity - 12V CCA (24V CCA) 925 (625)  Starter rolling amps @ 0°C - 12VDC (24VDC) 920 (600)  12 Volt battery cable size up to 10 ft (3m) 000  Air 60 Hz 50 Hz  Air consumption - cfm (m³/m) 547 (15.5) 353 (10.0)  Approx heat radiated to air - BTU/min 2,040 1,700  Generator cooling air flow 1 & 3 Ø - cfm (m³/m) 1,100(31) 915 (26)  Exhaust gas volume - cfm (m³/m) 1,123 (32) 828 (23)  Exhaust gas temp - F° (C°) 703 (373) 849 (454)  Max. exhaust back pressure - inch H²O (mm H²O) 30 (762) 30 (762)  Wet exhaust elbow OD- in (mm) 5 (127) 5 (127)  Dry exhaust elbow in (mm) 4 (102) 4 (102)  Fuel  Fuel injection pump type and control High Pressure Common Rail  Min suction - in (mm) 0.31 (8)  Max fuel flow to transfer pump - gph 42.8  Specific fuel consumption max load 60 hz - lbs/hp-hr 0.363  Approx. fuel rate** at 60 Hz full load - gph (lph) 42.2 (46.1)  Approx. fuel rate** at 50 Hz full load - gph (lph) 9.5 (36.1)  Max Engine Operating Angle  Continuous (with separate expansion tank) 25  Dimensions and Weight Open genset w/ enclosure  Length - inches (mm) 39.84 (1012) 42.0 (1067)  Height - inches (mm) 42.0 (1067)	DC Electrical (12V standard, 24V optional)		
Min battery capacity - 12V CCA (24V CCA) 925 (625)  Starter rolling amps @ 0°C - 12VDC (24VDC) 920 (600)  12 Volt battery cable size up to 10 ft (3m) 000  Air 60 Hz 50 Hz  Air consumption - cfm (m³/m) 547 (15.5) 353 (10.0)  Approx heat radiated to air - BTU/min 2,040 1,700  Generator cooling air flow 1 & 3 Ø - cfm (m³/m) 1,100(31) 915 (26)  Exhaust gas volume - cfm (m³/m) 1,123 (32) 828 (23)  Exhaust gas temp - F° (C°) 703 (373) 849 (454)  Max. exhaust back pressure - inch H²O (mm H²O) 30 (762) 30 (762)  Wet exhaust elbow OD- in (mm) 5 (127) 5 (127)  Dry exhaust elbow in (mm) 4 (102) 4 (102)  Fuel  Fuel injection pump type and control High Pressure Common Rail  Min suction - in (mm) 0.31 (8)  Max fuel flow to transfer pump - gph 42.8  Specific fuel consumption max load 60 hz - lbs/hp-hr 0.363  Approx. fuel rate** at 60 Hz full load - gph (lph) 42.2 (46.1)  Approx. fuel rate** at 50 Hz full load - gph (lph) 9.5 (36.1)  Max Engine Operating Angle  Continuous (with separate expansion tank) 25  Dimensions and Weight Open genset w/ enclosure  Length - inches (mm) 39.84 (1012) 42.0 (1067)  Height - inches (mm) 42.0 (1067)	DC starting voltage - standard (optional)	12 (24)	
12 Volt battery cable size up to 10 ft (3m)  Air  60 Hz  50 Hz  Air consumption - cfm (m³/m)  Approx heat radiated to air - BTU/min  Ap	Min battery capacity - 12V CCA (24V CCA)	925 (625)	
12 Volt battery cable size up to 10 ft (3m)  Air  60 Hz  50 Hz  Air consumption - cfm (m³/m)  Approx heat radiated to air - BTU/min  Ap	Starter rolling amps @ 0°C - 12VDC (24VDC)	920 (600)	
Air         60 Hz         50 Hz           Air consumption - cfm (m³/m)         547 (15.5)         353 (10.0)           Approx heat radiated to air - BTU/min         2,040         1,700           Generator cooling air flow 1 & 3 Ø - cfm (m³/m)         1,100(31)         915 (26)           Exhaust gas volume - cfm (m³/m)         1,123 (32)         828 (23)           Exhaust gas temp - F° (C°)         703 (373)         849 (454)           Max. exhaust back pressure - inch H²O (mm H²O)         30 (762)         30 (762)           Wet exhaust elbow OD- in (mm)         5 (127)         5 (127)           Dry exhaust elbow in (mm)         4 (102)         4 (102)           Fuel         High Pressure Common Rail           Min suction - in (mm)         0.31 (8)           Min return line - in (mm)         0.31 (8)           Max fuel transfer pump suction lift - ft (m)         7.9 (2.4)           Max fuel flow to transfer pump - gph         42.8           Specific fuel consumption max load 60 hz - lbs/hp-hr         0.363           Approx. fuel rate** at 60 Hz full load - gph (lph)         12.2 (46.1)           Approx. fuel rate** at 50 Hz full load - gph (lph)         12.2 (46.1)           Max Engine Operating Angle         Continuous (with separate expansion tank)         25           Intermittent		000	
Approx heat radiated to air - BTU/min 2,040 1,700  Generator cooling air flow 1 & 3 Ø - cfm (m³/m) 1,100(31) 915 (26)  Exhaust gas volume - cfm (m³/m) 1,123 (32) 828 (23)  Exhaust gas temp - F° (C°) 703 (373) 849 (454)  Max. exhaust back pressure - inch H²O (mm H²O) 30 (762) 30 (762)  Wet exhaust elbow OD- in (mm) 5 (127) 5 (127)  Dry exhaust elbow in (mm) 4 (102) 4 (102)  Fuel  Fuel injection pump type and control High Pressure Common Rail  Min suction - in (mm) 0,31 (8)  Min return line - in (mm) 0,31 (8)  Max fuel transfer pump suction lift - ft (m) 7.9 (2.4)  Max fuel flow to transfer pump - gph 42.8  Specific fuel consumption max load 60 hz - lbs/hp-hr 0,388  Specific fuel consumption max load 50 hz - lbs/hp-hr 0,363  Approx. fuel rate** at 60 Hz full load - gph (lph) 12.2 (46.1)  Approx. fuel rate** at 50 Hz full load - gph (lph) 9.5 (36.1)  Max Engine Operating Angle  Continuous (with separate expansion tank) 25  Intermittent (2 minutes) 35  Dimensions and Weight Open genset w/ enclosure  Length - inches (mm) 84.4 (2144) 90.0 (2286)  Width - inches (mm) 39.84 (1012) 42.0 (1067)		60 Hz	50 Hz
Approx heat radiated to air - BTU/min 2,040 1,700  Generator cooling air flow 1 & 3 Ø - cfm (m³/m) 1,100(31) 915 (26)  Exhaust gas volume - cfm (m³/m) 1,123 (32) 828 (23)  Exhaust gas temp - F° (C°) 703 (373) 849 (454)  Max. exhaust back pressure - inch H²O (mm H²O) 30 (762) 30 (762)  Wet exhaust elbow OD- in (mm) 5 (127) 5 (127)  Dry exhaust elbow in (mm) 4 (102) 4 (102)  Fuel  Fuel injection pump type and control High Pressure Common Rail  Min suction - in (mm) 0,31 (8)  Min return line - in (mm) 0,31 (8)  Max fuel transfer pump suction lift - ft (m) 7.9 (2.4)  Max fuel flow to transfer pump - gph 42.8  Specific fuel consumption max load 60 hz - lbs/hp-hr 0,388  Specific fuel consumption max load 50 hz - lbs/hp-hr 0,363  Approx. fuel rate** at 60 Hz full load - gph (lph) 12.2 (46.1)  Approx. fuel rate** at 50 Hz full load - gph (lph) 9.5 (36.1)  Max Engine Operating Angle  Continuous (with separate expansion tank) 25  Intermittent (2 minutes) 35  Dimensions and Weight Open genset w/ enclosure  Length - inches (mm) 84.4 (2144) 90.0 (2286)  Width - inches (mm) 39.84 (1012) 42.0 (1067)	Air consumption - cfm (m³/m)	547 (15.5)	353 (10.0)
Generator cooling air flow 1 & 3 Ø - cfm (m³/m)       1,100(31)       915 (26)         Exhaust gas volume - cfm (m³/m)       1,123 (32)       828 (23)         Exhaust gas temp - F° (C°)       703 (373)       849 (454)         Max. exhaust back pressure - inch H²O (mm H²O)       30 (762)       30 (762)         Wet exhaust elbow OD- in (mm)       5 (127)       5 (127)         Dry exhaust elbow in (mm)       4 (102)       4 (102)         Fuel         Fuel injection pump type and control       High Pressure Common Rail         Min suction - in (mm)       0.31 (8)         Min return line - in (mm)       0.31 (8)         Max fuel transfer pump suction lift - ft (m)       7.9 (2.4)         Max fuel flow to transfer pump - gph       42.8         Specific fuel consumption max load 60 hz - lbs/hp-hr       0.388         Specific fuel consumption max load 50 hz - lbs/hp-hr       0.363         Approx. fuel rate** at 60 Hz full load - gph (lph)       12.2 (46.1)         Approx. fuel rate** at 50 Hz full load - gph (lph)       9.5 (36.1)         Max Engine Operating Angle       25         Continuous (with separate expansion tank)       25         Intermittent (2 minutes)       35         Dimensions and Weight       Open genset       w/ enclosure		2,040	1,700
Exhaust gas volume - cfm (m³/m)       1,123 (32)       828 (23)         Exhaust gas temp - F° (C°)       703 (373)       849 (454)         Max. exhaust back pressure - inch H²O (mm H²O)       30 (762)       30 (762)         Wet exhaust elbow OD- in (mm)       5 (127)       5 (127)         Dry exhaust elbow in (mm)       4 (102)       4 (102)         Fuel         Fuel injection pump type and control       High Pressure Common Rail         Min suction - in (mm)       0.31 (8)         Min return line - in (mm)       0.31 (8)         Max fuel transfer pump suction lift - ft (m)       7.9 (2.4)         Max fuel flow to transfer pump - gph       42.8         Specific fuel consumption max load 60 hz - lbs/hp-hr       0.388         Specific fuel consumption max load 50 hz - lbs/hp-hr       0.363         Approx. fuel rate** at 60 Hz full load - gph (lph)       12.2 (46.1)         Approx. fuel rate** at 50 Hz full load - gph (lph)       9.5 (36.1)         Max Engine Operating Angle       25         Continuous (with separate expansion tank)       25         Intermittent (2 minutes)       35         Dimensions and Weight       Open genset w/ enclosure         Length - inches (mm)       38.3 (973)       42.0 (1067)         Height - inches	• •	1,100(31)	915 (26)
Exhaust gas temp - F° (C°)  Max. exhaust back pressure - inch H²O (mm H²O)  30 (762)  30 (762)  Wet exhaust elbow OD- in (mm)  5 (127)  5 (127)  Dry exhaust elbow in (mm)  4 (102)  4 (102)  Fuel  Fuel injection pump type and control  Min suction - in (mm)  0.31 (8)  Min return line - in (mm)  0.31 (8)  Max fuel transfer pump suction lift - ft (m)  Max fuel flow to transfer pump - gph  42.8  Specific fuel consumption max load 60 hz - lbs/hp-hr  O.363  Approx. fuel rate** at 60 Hz full load - gph (lph)  Approx. fuel rate** at 50 Hz full load - gph (lph)  Max Engine Operating Angle  Continuous (with separate expansion tank)  Dimensions and Weight  Dopen genset w/ enclosure  Length - inches (mm)  84.4 (2144)  90.0 (2286)  Width - inches (mm)  42.0 (1067)			
Max. exhaust back pressure - inch H²O (mm H²O)       30 (762)       30 (762)         Wet exhaust elbow OD- in (mm)       5 (127)       5 (127)         Dry exhaust elbow in (mm)       4 (102)       4 (102)         Fuel         Fuel injection pump type and control       High Pressure Common Rail         Min suction - in (mm)       0.31 (8)         Min return line - in (mm)       0.31 (8)         Max fuel transfer pump suction lift - ft (m)       7.9 (2.4)         Max fuel flow to transfer pump - gph       42.8         Specific fuel consumption max load 60 hz - lbs/hp-hr       0.388         Specific fuel consumption max load 50 hz - lbs/hp-hr       0.363         Approx. fuel rate** at 60 Hz full load - gph (lph)       12.2 (46.1)         Approx. fuel rate** at 50 Hz full load - gph (lph)       9.5 (36.1)         Max Engine Operating Angle         Continuous (with separate expansion tank)       25         Intermittent (2 minutes)       35         Dimensions and Weight       Open genset w/ enclosure         Length - inches (mm)       84.4 (2144)       90.0 (2286)         Width - inches (mm)       39.84 (1012)       42.0 (1067)			
Wet exhaust elbow OD- in (mm)       5 (127)       5 (127)         Dry exhaust elbow in (mm)       4 (102)       4 (102)         Fuel         Fuel injection pump type and control       High Pressure Common Rail         Min suction - in (mm)       0.31 (8)         Min return line - in (mm)       0.31 (8)         Max fuel transfer pump suction lift - ft (m)       7.9 (2.4)         Max fuel flow to transfer pump - gph       42.8         Specific fuel consumption max load 60 hz - lbs/hp-hr       0.388         Specific fuel consumption max load 50 hz - lbs/hp-hr       0.363         Approx. fuel rate** at 60 Hz full load - gph (lph)       12.2 (46.1)         Approx. fuel rate** at 50 Hz full load - gph (lph)       9.5 (36.1)         Max Engine Operating Angle       25         Continuous (with separate expansion tank)       25         Intermittent (2 minutes)       35         Dimensions and Weight       Open genset w/ enclosure         Length - inches (mm)       84.4 (2144)       90.0 (2286)         Width - inches (mm)       39.84 (1012)       42.0 (1067)         Height - inches (mm)       39.84 (1012)       42.0 (1067)			· ,
Dry exhaust elbow in (mm)       4 (102)       4 (102)         Fuel injection pump type and control         Min suction - in (mm)       0.31 (8)         Min return line - in (mm)       0.31 (8)         Max fuel transfer pump suction lift - ft (m)       7.9 (2.4)         Max fuel flow to transfer pump - gph       42.8         Specific fuel consumption max load 60 hz - lbs/hp-hr       0.388         Specific fuel consumption max load 50 hz - lbs/hp-hr       0.363         Approx. fuel rate** at 60 Hz full load - gph (lph)       12.2 (46.1)         Approx. fuel rate** at 50 Hz full load - gph (lph)       9.5 (36.1)         Max Engine Operating Angle       25         Continuous (with separate expansion tank)       25         Intermittent (2 minutes)       35         Dimensions and Weight       Open genset w/ enclosure         Length - inches (mm)       84.4 (2144)       90.0 (2286)         Width - inches (mm)       38.3 (973)       42.0 (1067)         Height - inches (mm)       39.84 (1012)       42.0 (1067)	·		
Fuel injection pump type and control High Pressure Common Rail  Min suction - in (mm) 0.31 (8)  Min return line - in (mm) 0.31 (8)  Max fuel transfer pump suction lift - ft (m) 7.9 (2.4)  Max fuel flow to transfer pump - gph 42.8  Specific fuel consumption max load 60 hz - lbs/hp-hr 0.388  Specific fuel consumption max load 50 hz - lbs/hp-hr 0.363  Approx. fuel rate** at 60 Hz full load - gph (lph) 12.2 (46.1)  Approx. fuel rate** at 50 Hz full load - gph (lph) 9.5 (36.1)  Max Engine Operating Angle  Continuous (with separate expansion tank) 25  Intermittent (2 minutes) 35  Dimensions and Weight Open genset w/ enclosure  Length - inches (mm) 84.4 (2144) 90.0 (2286)  Width - inches (mm) 38.3 (973) 42.0 (1067)  Height - inches (mm) 39.84 (1012) 42.0 (1067)			
Min suction - in (mm)       0.31 (8)         Min return line - in (mm)       0.31 (8)         Max fuel transfer pump suction lift - ft (m)       7.9 (2.4)         Max fuel flow to transfer pump - gph       42.8         Specific fuel consumption max load 60 hz - lbs/hp-hr       0.388         Specific fuel consumption max load 50 hz - lbs/hp-hr       0.363         Approx. fuel rate** at 60 Hz full load - gph (lph)       12.2 (46.1)         Approx. fuel rate** at 50 Hz full load - gph (lph)       9.5 (36.1)         Max Engine Operating Angle       25         Continuous (with separate expansion tank)       25         Intermittent (2 minutes)       35         Dimensions and Weight       Open genset       w/ enclosure         Length - inches (mm)       84.4 (2144)       90.0 (2286)         Width - inches (mm)       38.3 (973)       42.0 (1067)         Height - inches (mm)       39.84 (1012)       42.0 (1067)		. ()	. ()
Min suction - in (mm)       0.31 (8)         Min return line - in (mm)       0.31 (8)         Max fuel transfer pump suction lift - ft (m)       7.9 (2.4)         Max fuel flow to transfer pump - gph       42.8         Specific fuel consumption max load 60 hz - lbs/hp-hr       0.388         Specific fuel consumption max load 50 hz - lbs/hp-hr       0.363         Approx. fuel rate** at 60 Hz full load - gph (lph)       12.2 (46.1)         Approx. fuel rate** at 50 Hz full load - gph (lph)       9.5 (36.1)         Max Engine Operating Angle       25         Continuous (with separate expansion tank)       25         Intermittent (2 minutes)       35         Dimensions and Weight       Open genset       w/ enclosure         Length - inches (mm)       84.4 (2144)       90.0 (2286)         Width - inches (mm)       38.3 (973)       42.0 (1067)         Height - inches (mm)       39.84 (1012)       42.0 (1067)	Fuel injection pump type and control	High Pressure Common Rail	
Min return line - in (mm)       0.31 (8)         Max fuel transfer pump suction lift - ft (m)       7.9 (2.4)         Max fuel flow to transfer pump - gph       42.8         Specific fuel consumption max load 60 hz - lbs/hp-hr       0.388         Specific fuel consumption max load 50 hz - lbs/hp-hr       0.363         Approx. fuel rate** at 60 Hz full load - gph (lph)       12.2 (46.1)         Approx. fuel rate** at 50 Hz full load - gph (lph)       9.5 (36.1)         Max Engine Operating Angle       25         Continuous (with separate expansion tank)       25         Intermittent (2 minutes)       35         Dimensions and Weight       Open genset       w/ enclosure         Length - inches (mm)       84.4 (2144)       90.0 (2286)         Width - inches (mm)       38.3 (973)       42.0 (1067)         Height - inches (mm)       39.84 (1012)       42.0 (1067)			
Max fuel transfer pump suction lift - ft (m)  Max fuel flow to transfer pump - gph  Specific fuel consumption max load 60 hz - lbs/hp-hr  Specific fuel consumption max load 50 hz - lbs/hp-hr  Specific fuel consumption max load 50 hz - lbs/hp-hr  O.363  Approx. fuel rate** at 60 Hz full load - gph (lph)  Approx. fuel rate** at 50 Hz full load - gph (lph)  Max Engine Operating Angle  Continuous (with separate expansion tank)  Intermittent (2 minutes)  Dimensions and Weight  Open genset w/ enclosure  Length - inches (mm)  Width - inches (mm)  38.3 (973)  42.0 (1067)  Height - inches (mm)  39.84 (1012)  42.0 (1067)			
Max fuel flow to transfer pump - gph 42.8  Specific fuel consumption max load 60 hz - lbs/hp-hr 0.388  Specific fuel consumption max load 50 hz - lbs/hp-hr 0.363  Approx. fuel rate** at 60 Hz full load - gph (lph) 12.2 (46.1)  Approx. fuel rate** at 50 Hz full load - gph (lph) 9.5 (36.1)  Max Engine Operating Angle  Continuous (with separate expansion tank) 25  Intermittent (2 minutes) 35  Dimensions and Weight Open genset w/ enclosure  Length - inches (mm) 84.4 (2144) 90.0 (2286)  Width - inches (mm) 38.3 (973) 42.0 (1067)  Height - inches (mm) 39.84 (1012) 42.0 (1067)			
Specific fuel consumption max load 60 hz - lbs/hp-hr  Specific fuel consumption max load 50 hz - lbs/hp-hr  O.363  Approx. fuel rate** at 60 Hz full load - gph (lph)  Approx. fuel rate** at 50 Hz full load - gph (lph)  Max Engine Operating Angle  Continuous (with separate expansion tank)  Intermittent (2 minutes)  Dimensions and Weight  Length - inches (mm)  Water of the separate			
Specific fuel consumption max load 50 hz - lbs/hp-hr       0.363         Approx. fuel rate** at 60 Hz full load - gph (lph)       12.2 (46.1)         Approx. fuel rate** at 50 Hz full load - gph (lph)       9.5 (36.1)         Max Engine Operating Angle         Continuous (with separate expansion tank)       25         Intermittent (2 minutes)       35         Dimensions and Weight       Open genset w/ enclosure         Length - inches (mm)       84.4 (2144)       90.0 (2286)         Width - inches (mm)       38.3 (973)       42.0 (1067)         Height - inches (mm)       39.84 (1012)       42.0 (1067)			
Approx. fuel rate** at 60 Hz full load - gph (lph)       12.2 (46.1)         Approx. fuel rate** at 50 Hz full load - gph (lph)       9.5 (36.1)         Max Engine Operating Angle       25         Continuous (with separate expansion tank)       25         Intermittent (2 minutes)       35         Dimensions and Weight       Open genset       w/ enclosure         Length - inches (mm)       84.4 (2144)       90.0 (2286)         Width - inches (mm)       38.3 (973)       42.0 (1067)         Height - inches (mm)       39.84 (1012)       42.0 (1067)			
Approx. fuel rate** at 50 Hz full load - gph (lph)       9.5 (36.1)         Max Engine Operating Angle       25         Continuous (with separate expansion tank)       35         Dimensions and Weight       Open genset       w/ enclosure         Length - inches (mm)       84.4 (2144)       90.0 (2286)         Width - inches (mm)       38.3 (973)       42.0 (1067)         Height - inches (mm)       39.84 (1012)       42.0 (1067)			
Max Engine Operating Angle           Continuous (with separate expansion tank)         25           Intermittent (2 minutes)         35           Dimensions and Weight         Open genset         w/ enclosure           Length - inches (mm)         84.4 (2144)         90.0 (2286)           Width - inches (mm)         38.3 (973)         42.0 (1067)           Height - inches (mm)         39.84 (1012)         42.0 (1067)			
Continuous (with separate expansion tank)       25         Intermittent (2 minutes)       35         Dimensions and Weight       Open genset w/ enclosure         Length - inches (mm)       84.4 (2144)       90.0 (2286)         Width - inches (mm)       38.3 (973)       42.0 (1067)         Height - inches (mm)       39.84 (1012)       42.0 (1067)		9.5 (50.1)	
Dimensions and Weight       Open genset       w/ enclosure         Length - inches (mm)       84.4 (2144)       90.0 (2286)         Width - inches (mm)       38.3 (973)       42.0 (1067)         Height - inches (mm)       39.84 (1012)       42.0 (1067)		25	
Dimensions and Weight         Open genset         w/ enclosure           Length - inches (mm)         84.4 (2144)         90.0 (2286)           Width - inches (mm)         38.3 (973)         42.0 (1067)           Height - inches (mm)         39.84 (1012)         42.0 (1067)	·		
Length - inches (mm)       84.4 (2144)       90.0 (2286)         Width - inches (mm)       38.3 (973)       42.0 (1067)         Height - inches (mm)       39.84 (1012)       42.0 (1067)	, ,		w/ enclosure
Width - inches (mm)       38.3 (973)       42.0 (1067)         Height - inches (mm)       39.84 (1012)       42.0 (1067)			<u> </u>
Height - inches (mm) 39.84 (1012) 42.0 (1067)	-		
_ ·			
weight - pounds (Kilograms) 3495 (1585) 4212 (1911)			
	vveignt - pounds (kilograms)	5 <del>4</del> 75 (1585)	4212 (1911)

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Prime kW ratings for 3 Ø at 0.8 power factor. Consult factory for deration factors.
 Based on prime kW rating at 1800 and 1500 RPM. Fuel rate may vary depending on operating conditions.

<sup>^</sup> Dimensions provided for information only. Do not use for installation. Contact factory for installation drawings and info.