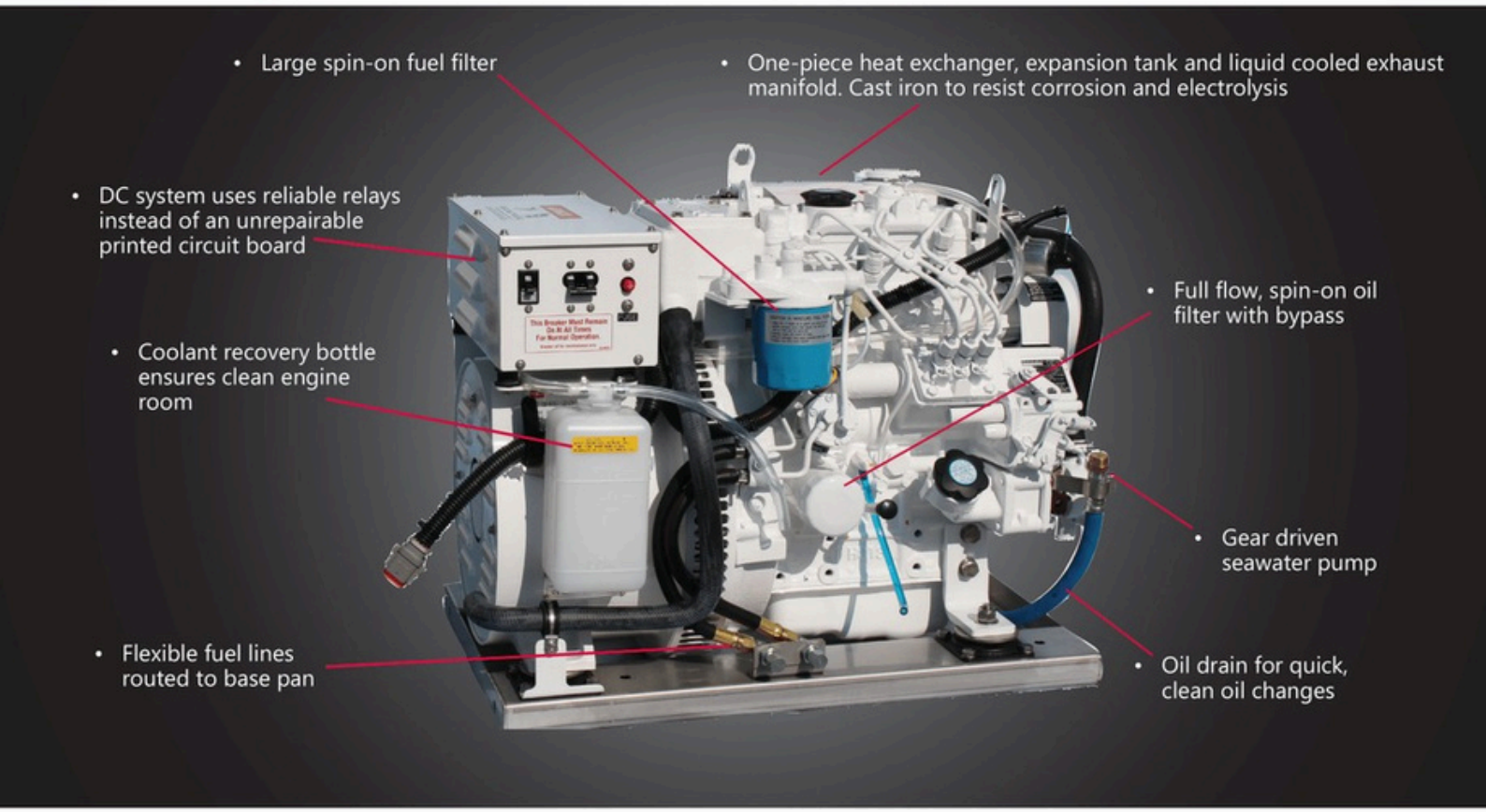
NORTHERN LIGHTS®

M673LD3G

5 kW (60 Hz, 1800 rpm)
4.5 kW (50 Hz, 1500 rpm)



SPECIFICATIONS AND DIMENSIONS

AC Output[1]

5 kW	60 Hz, 1800 RPM, 1 Ph, 1.0 PF, 240 V/20.8 A, 120 V/41.6 A
4.5 kW	50 Hz, 1500 RPM, 1 Ph, 1.0 PF, 220 V/20.5 A
Voltage regulation	±5%

1. Based on SAE J1995 and ISO 3046.

Weight and Height

Approximate dry weight	371 lbs (168 kg)
Length	27.5 in (698 mm)
Width	17.1 in (434 mm)
Height	20.4 in (517 mm)
Sound enclosure weight	34 lbs (15.4 kg)
Enclosure length	28.5 in (724 mm)
Enclosure width	19.5 in (495 mm)
Enclosure height	20.9 in (530mm)

Engine Data

Type	Vertical inline 3 cylinder diesel
Displacement	46.4 in^3 (0.761 ltr)
Bore/Stroke	2.64/2.83 in (67/72 mm)
HP @ RPM	10.1/1800 8.4/1500
Approximate fuel use [2]:	
1800 RPM @ full load	0.59 gph (2.2 lph)
1800 RPM @ half load	0.32 gph (1.2 lph)
1500 RPM @ full load	0.50 gph (1.9 lph)
1500 RPM @ half load	0.28 gph (1.1 lph)

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

Installation Data

Wet exhaust elbow	1.5 inch (38 mm) OD
Raw water inlet	3/4 in (19 mm) OD
Fuel inlet and return	5/16 - - 37T JIC

Consult factory for classification society.

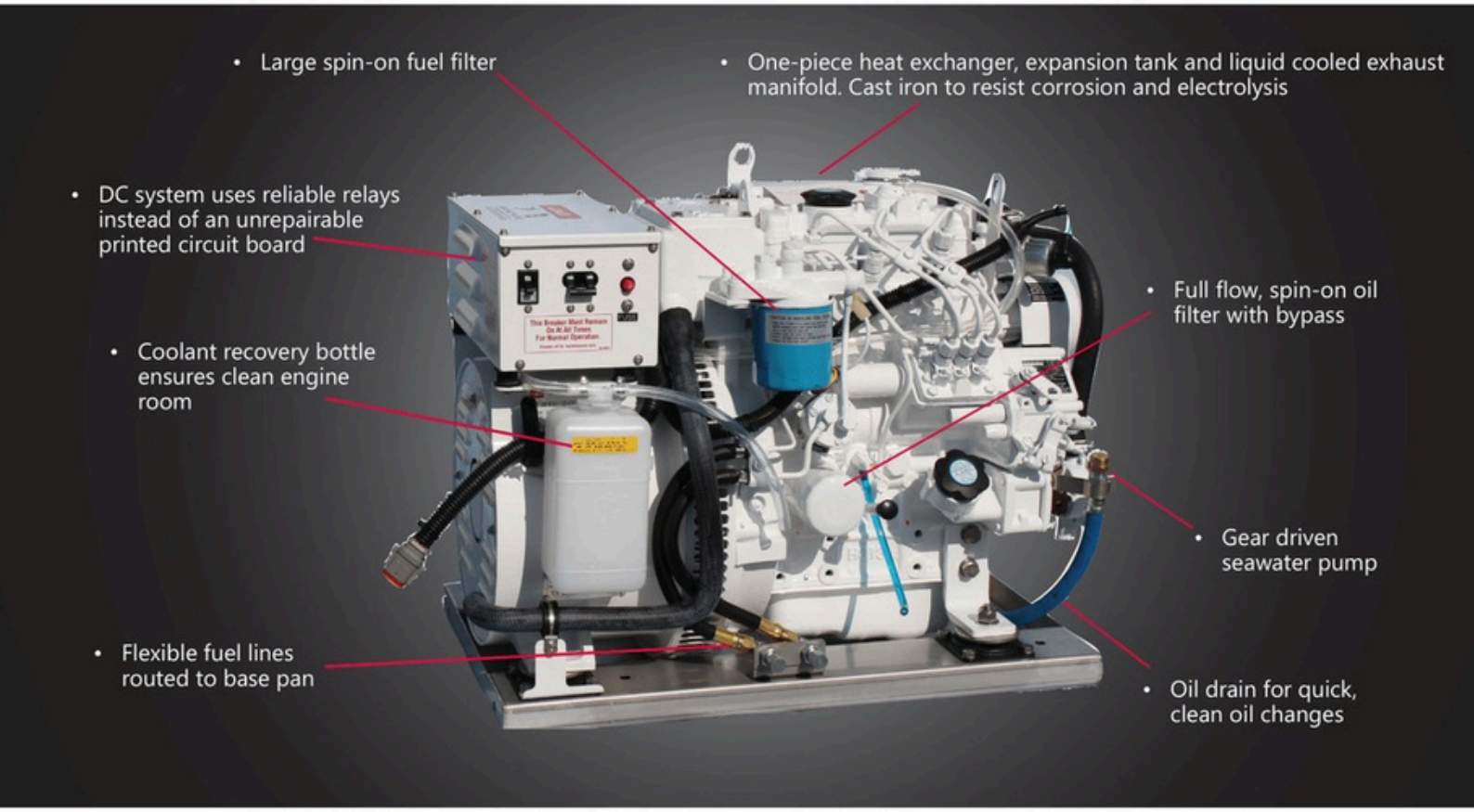
US EPA Tier III

Information and dimensions are subject to change without notice.

NORTHERN LIGHTS

M673L3G

6 kW (60 Hz, 1800 rpm)
5 kW (50 Hz, 1500 rpm)



SPECIFICATIONS AND DIMENSIONS

AC Output[1]

6 KW	60 Hz, 1800 RPM, 1 Ph, 1.0 PF, 240 V/25 A, 120 V/50 A
5 KW	50 Hz, 1500 RPM, 1 Ph, 1.0 PF, 220 V/22.7 A
Voltage regulation	±5%

1. Based on SAE J1995 and ISO 3046.

Weight and Height

Approximate dry weight	371 lbs (168 kg)
Length	27.5 in (698 mm)
Width	17.1 in (434 mm)
Height	20.2 in (512 mm)
Sound enclosure weight	34 lbs (15.4 kg)
Enclosure length	28.5 in (724 mm)
Enclosure width	19.5 in (495 mm)
Enclosure height	20.9 in (530 mm)

Engine Data

Type	Vertical inline 3 cylinder diesel
Displacement	46.4 in^3 (0.761 ltr)
Bore/Stroke	2.64/2.83 in (67/72 mm)
HP @ RPM	10.1/1800 8.4/1500
Approximate fuel use [2]:	
1800 RPM @ full load	0.59 gph (2.2 lph)
1800 RPM @ half load	0.32 gph (1.2 lph)
1500 RPM @ full load	0.50 gph (1.9 lph)
1500 RPM @ half load	0.28 gph (1.1 lph)

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

Installation Data

Wet exhaust elbow	1.5 inch (38 mm) OD
Raw water inlet	3/4 in (19 mm) OD
Fuel inlet and return	5/16 - 37T JIC

Consult factory for classification society.

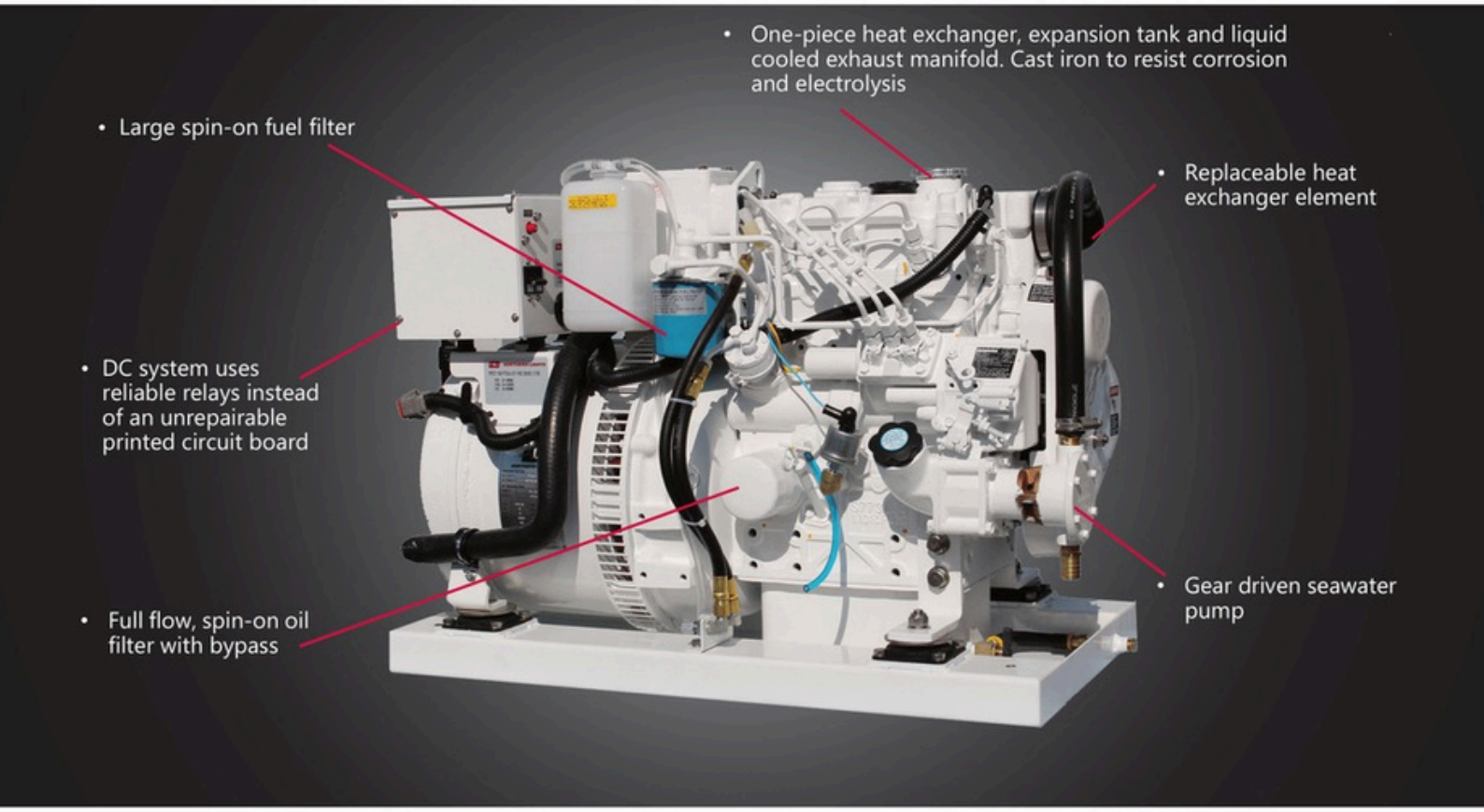
US EPA Tier III

Information and dimensions are subject to change without notice.

NORTHERN LIGHTS

M773LW3G

9 kW (60 Hz, 1800 rpm)
7 kW (50 Hz, 1500 rpm)



SPECIFICATIONS AND DIMENSIONS

AC Output[1]

9 KW	60 Hz, 1800 RPM, 1 Ph, 1.0 PF, 120/240 V/37.5 A, 120 V/75 A
7 KW	50 Hz, 1500 RPM, 1 Ph, 1.0 PF, 220 V/31.8 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	537 lbs (244 kg)
Length	33.4 in (848 mm)
Width	17.4 in (442 mm)
Height	24.0 in (608 mm)
Sound enclosure weight	60 lbs (27.2 kg)
Enclosure length	35.0 in (889 mm)
Enclosure width	22.0 in (559 mm)
Enclosure height	25.7 in (654 mm)

Consult factory for classification society.

US EPA Tier III

Engine Data

Type	Vertical inline 3 cylinder diesel
Displacement	69 in^3 (1.13 ltr)
Bore/Stroke	3.03/3.19 in (77/81 mm)
HP @ RPM	15/1800 12/1500
Approximate fuel use [2]:	
1800 RPM @ full load	0.93 gph (3.52 lph)
1800 RPM @ half load	0.51 gph (1.93 lph)
1500 RPM @ full load	0.72 gph (2.72 lph)
1500 RPM @ half load	0.37 gph (1.40 lph)

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

Installation Data

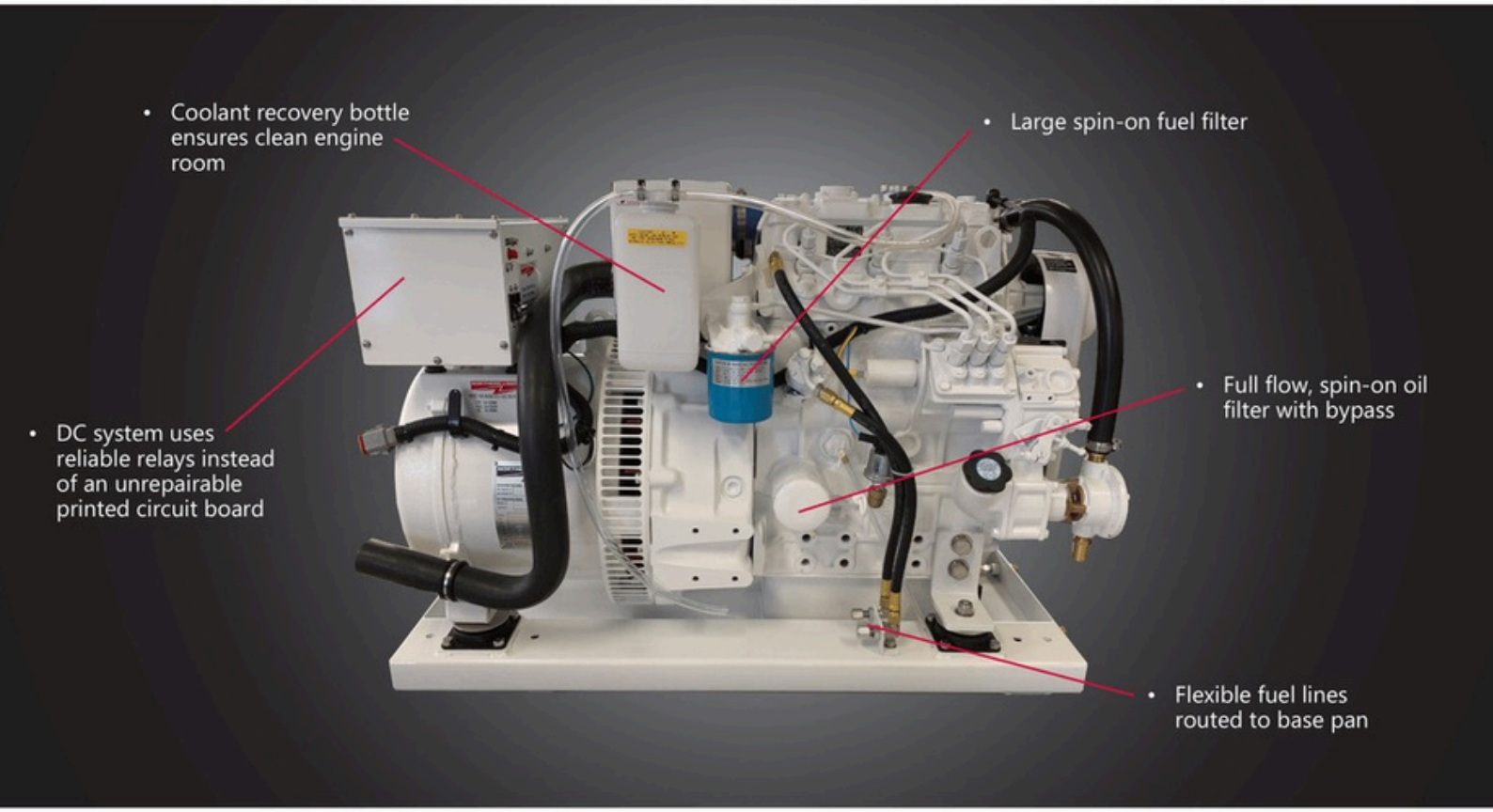
Wet exhaust elbow	2 inch (51 mm) OD
Raw water inlet	3/4 in (19 mm) OD
Fuel inlet	5/16 - 37T JIC
Fuel return	1/4 - 37T JIC

Information and dimensions are subject to change without notice.

NORTHERN LIGHTS®

M843NW3G

12 kW (60 Hz, 1800 rpm)
10 kW (50 Hz, 1500 rpm)



SPECIFICATIONS AND DIMENSIONS

AC Output[1]

12 KW	60 Hz, 1800 RPM, 1 Ph, 1.0 PF, 240 V/50 A, 120 V/100 A
10 KW	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	743 lbs (337 kg)
Length	38.5 in (977 mm)
Width	19.0 in (482 mm)
Height	25.2 in (641 mm)
Sound enclosure weight	53 lbs (24 kg)
Enclosure length	38.8 in (986 mm)
Enclosure width	22.6 in (574 mm)
Enclosure height	25.8 in (655 mm)

Engine Data

Type	Vertical inline 3 cylinder diesel
Displacement	91 in^3 (1.5 ltr)
Bore/Stroke	3.30/3.50 in (84/90 mm)
HP @ RPM	20/1800 17/1500
Approximate fuel use [2]:	
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 in (19 mm) OD
Fuel inlet	5/16 - 37T JIC
Fuel return	1/4 - 37T JIC

Consult factory for classification society.

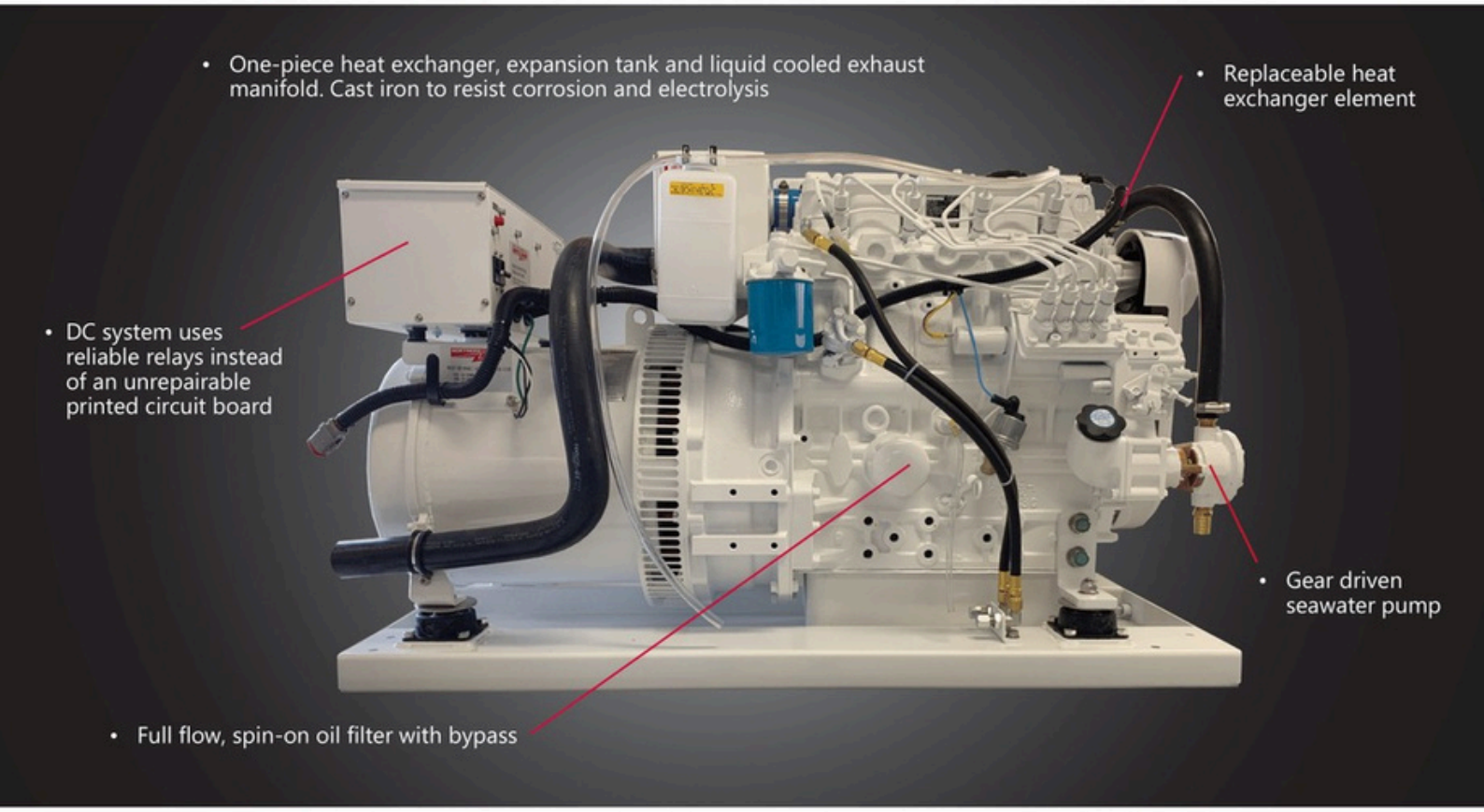
US EPA Tier III

Information and dimensions are subject to change without notice.

NORTHERN LIGHTS®

M844DW3G

16 kW (60 Hz, 1800 rpm)
14 kW (50 Hz, 1500 rpm)



SPECIFICATIONS AND DIMENSIONS

AC Output[1]

16 KW	60 Hz, 1800 RPM, 1 Ph, 1.0 PF, 120/240 V/67 A, 120 V/133 A
14 KW	50 Hz, 1500 RPM, 1 Ph, 1.0 PF, 220 V/64 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	948 lbs (430 kg)
Length	45.9 in (1113 mm)
Width	19.5 in (495 mm)
Height	27.5 in (699 mm)
Sound enclosure weight	59 lbs (27 kg)
Enclosure length	46.1 in (1170 mm)
Enclosure width	22.5 in (572 mm)
Enclosure height	28.1 in (714 mm)

Consult factory for classification society.

US EPA Tier III

Engine Data

Type	Vertical inline 4 cylinder diesel
Displacement	135 in^3 (2.2 ltr)
Bore/Stroke	3.30/3.90 in (84/100 mm)
HP @ RPM	32/1800 26/1500
Approximate fuel use [2]:	
1800 RPM @ full load	1.70 gph (6.50 lph)
1800 RPM @ half load	1.00 gph (3.90 lph)
1500 RPM @ full load	1.36 gph (5.20 lph)
1500 RPM @ half load	0.80 gph (3.00 lph)

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

Installation Data

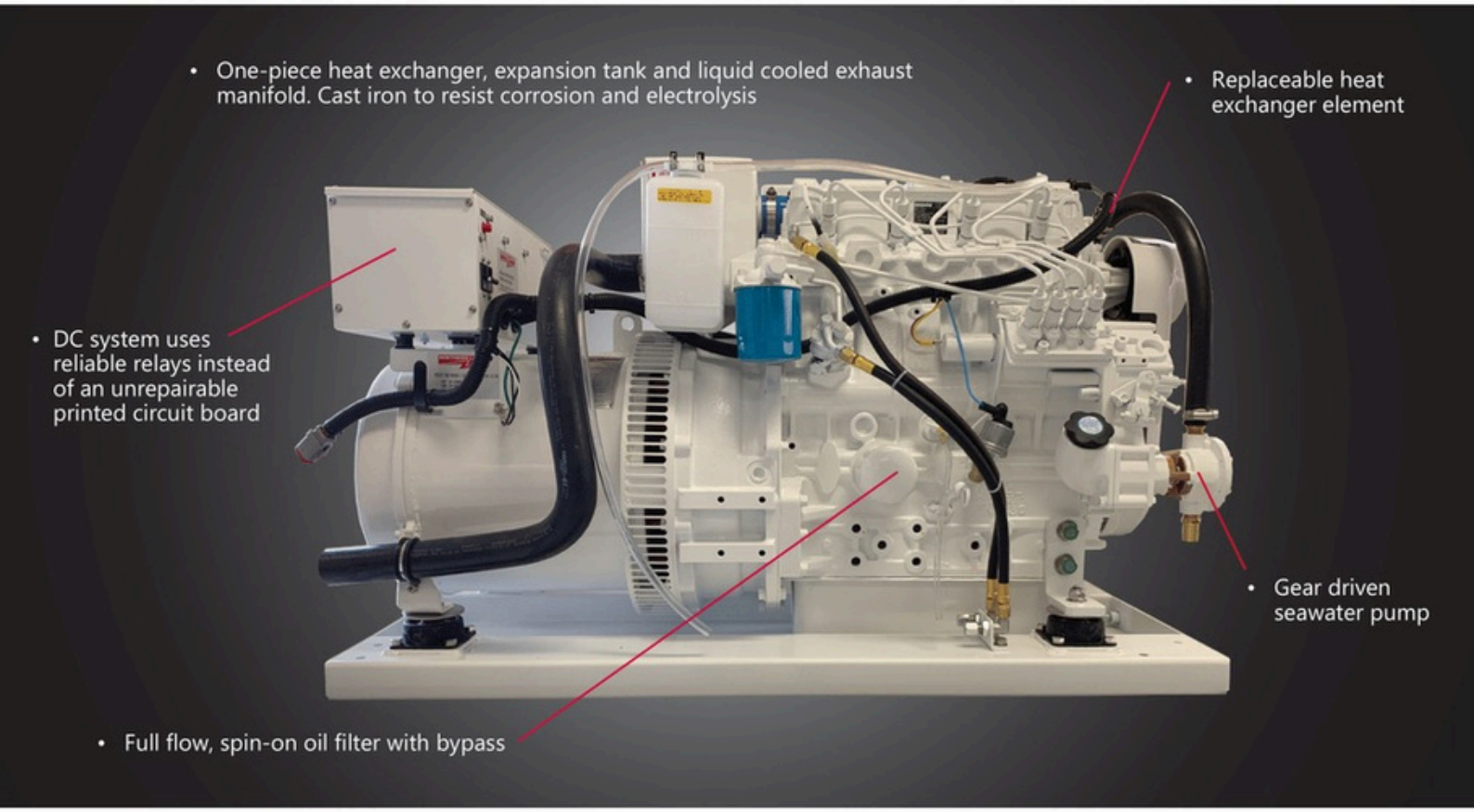
Wet exhaust elbow	2 inch (51 mm) OD
Raw water inlet	3/4 in (19 mm) OD
Fuel inlet and return	1/4 inch NPT

Information and dimensions are subject to change without notice.

NORTHERN LIGHTS®

M844LW3G

20 kW (60 Hz, 1800 rpm)
16 kW (50 Hz, 1500 rpm)



SPECIFICATIONS AND DIMENSIONS

AC Output[1]

20 KW	60 Hz, 1800 RPM, 1 Ph, 1.0 PF, 120/240 V/83.3 A, 120 V/167 A
16 KW	50 Hz, 1500 RPM, 1 Ph, 1.0 PF, 220 V/72.7 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	948 lbs (430 kg)
Length	45.9 in (1113 mm)
Width	19.5 in (495 mm)
Height	27.5 in (699 mm)
Sound enclosure weight	59 lbs (27 kg)
Enclosure length	46.0 in (1169 mm)
Enclosure width	22.5 in (572 mm)
Enclosure height	28.1 in (714 mm)

CE *Consult factory for classification society.*

US EPA Tier III

Engine Data

Type	Vertical inline 4 cylinder diesel
Displacement	135 in³ (2.2 ltr)
Bore/Stroke	3.30/3.90 in (84/100 mm)
HP @ RPM	32/1800 26/1500
Approximate fuel use [2]:	
1800 RPM @ full load	1.70 gph (6.50 lph)
1800 RPM @ half load	1.00 gph (3.90 lph)
1500 RPM @ full load	1.36 gph (5.20 lph)
1500 RPM @ half load	0.80 gph (3.00 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 in (19 mm) OD
Fuel inlet	1/4 - NPT
Fuel return	1/4 - NPT

Information and dimensions are subject to change without notice.

NORTHERN LIGHTS®

M864W3G

25 kW (60 Hz, 1800 rpm)
20 kW (50 Hz, 1500 rpm)

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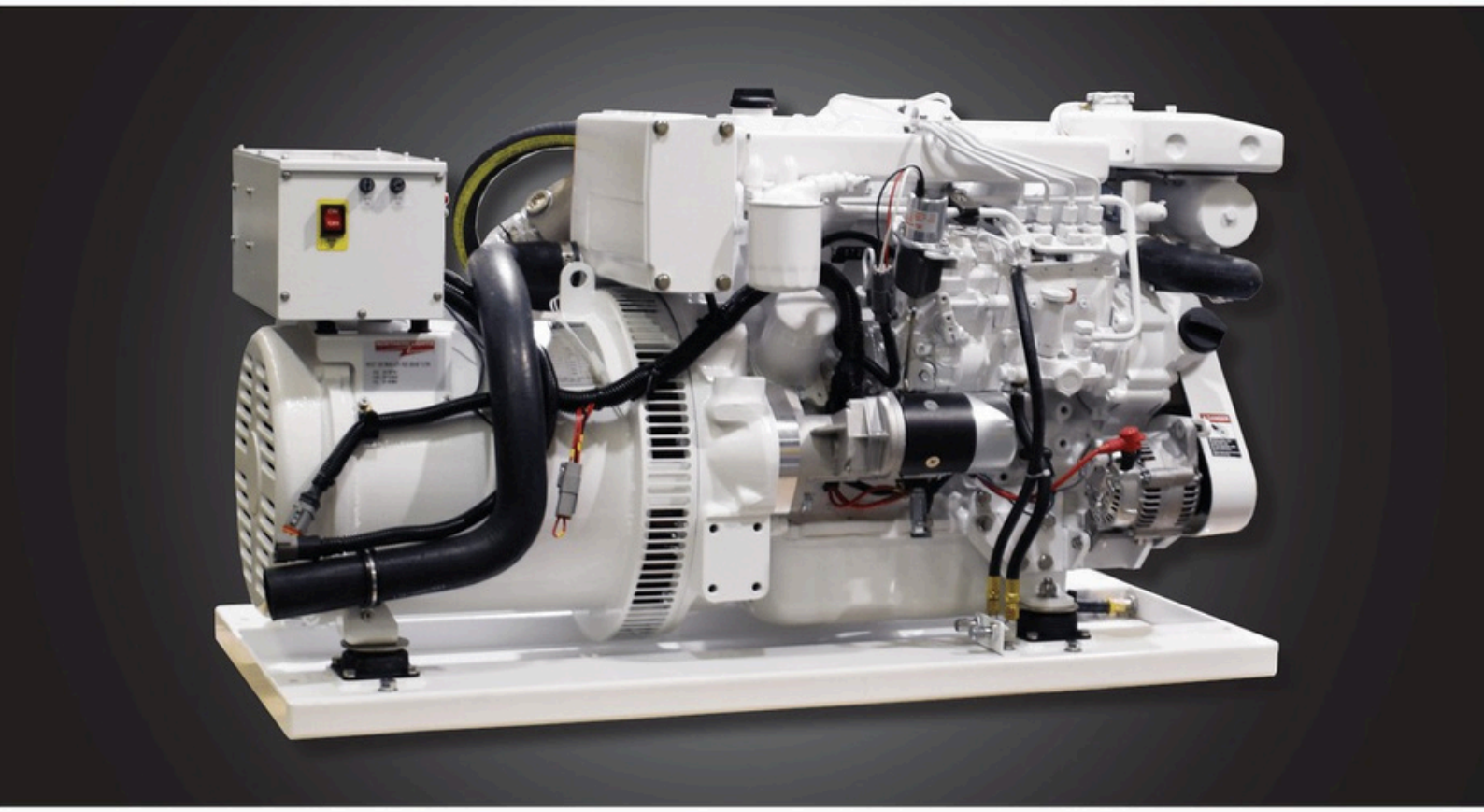


SPECIFICATIONS AND DIMENSIONS

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
Reconnectable to	Three Phase with 0.8 PF
Voltage regulation	±1%

1. Based on SAE J1995 and ISO 3046.

Weight and Height

Approximate dry weight	968 lbs (439 kg)
Length	46.7 in (1187 mm)
Width	21.6 in (549 mm)
Height	26.6 in (677 mm)
Sound enclosure weight	55 lbs (25 kg)
Enclosure length	48.9 in (1243 mm)
Enclosure width	25.0 in (635 mm)
Enclosure height	27.8 in (706 mm)

Engine Data

Type	Vertical inline 4 cylinder diesel
Displacement	152 in^3 (2.5 ltr)
Bore/Stroke	3.40/4.20 in (86/107 mm)
HP @ RPM	39/1800 33/1500
Approximate fuel use [2]:	
1800 RPM @ full load	2.23 gph (8.40 lph)
1800 RPM @ half load	1.17 gph (4.40 lph)
1500 RPM @ full load	1.78 gph (6.73 lph)
1500 RPM @ half load	0.93 gph (3.52 lph)

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

Installation Data

Wet exhaust elbow	3 inch (76 mm) OD
Raw water inlet	3/4 in (19 mm) OD
Fuel inlet	1/4 - NPT
Fuel return	1/4 - NPT

CE **AVAILABLE FOR EXPORT ONLY. NON-US FLAGGED VESSELS ONLY**

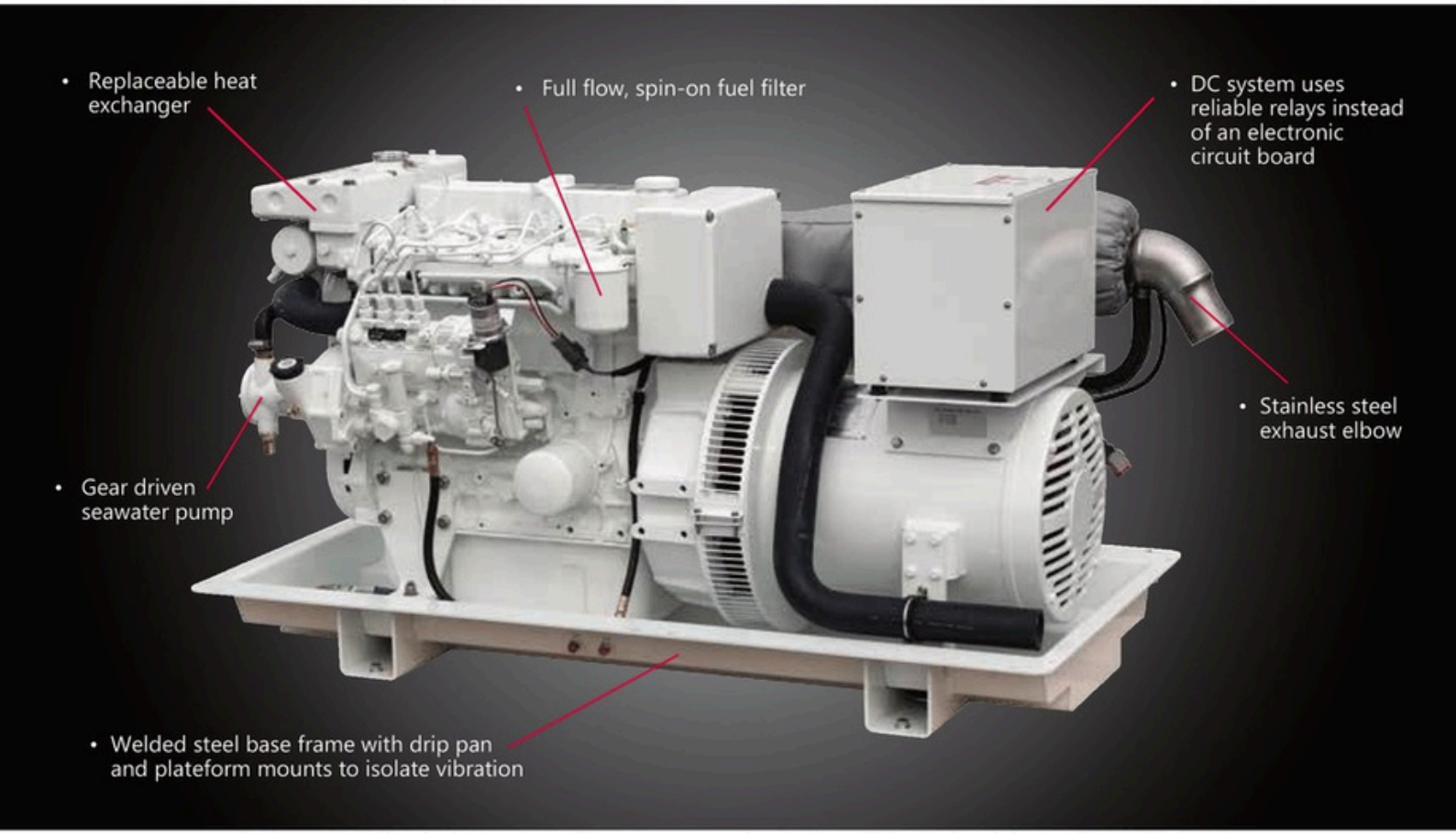
Consult factory for classification society.

Information and dimensions are subject to change without notice.

NORTHERN LIGHTS

M944W3F

30 kW (60 Hz, 1800 rpm)



SPECIFICATIONS AND DIMENSIONS

AC Output[1]

30 KW	60 Hz, 1800 RPM, 1 Ph, 1.0 PF, 120/240 V/125 A, 120 V/250 A
Optional	Three Phase with 0.8 PF (Not Reconnectable)
Voltage regulation	±1%

1. Based on SAE J1995 and ISO 3046.

Weight and Height

Approximate wet weight	1361 lbs (617 kg)
Length	59.1 in (1501 mm)
Width	29.0 in (737 mm)
Height	30.7 in (779 mm)
Sound enclosure weight	158 lbs (72 kg)
Enclosure length	56.0 in (1422 mm)
Enclosure width	29.0 in (737 mm)
Enclosure height	31.5 in (800 mm)

Consult factory for classification society.

US EPA TIER III

Engine Data

Type	Vertical inline 4 cylinder diesel
Displacement	203 in³ (3.3 ltr)
Bore/Stroke	3.70/4.72 in (94/120 mm)
HP @ RPM	49/1800
Approximate fuel use [2]:	
1800 RPM @ full load	2.80 gph (9.80 lph)
1800 RPM @ half load	1.50 gph (5.30 lph)

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

Installation Data

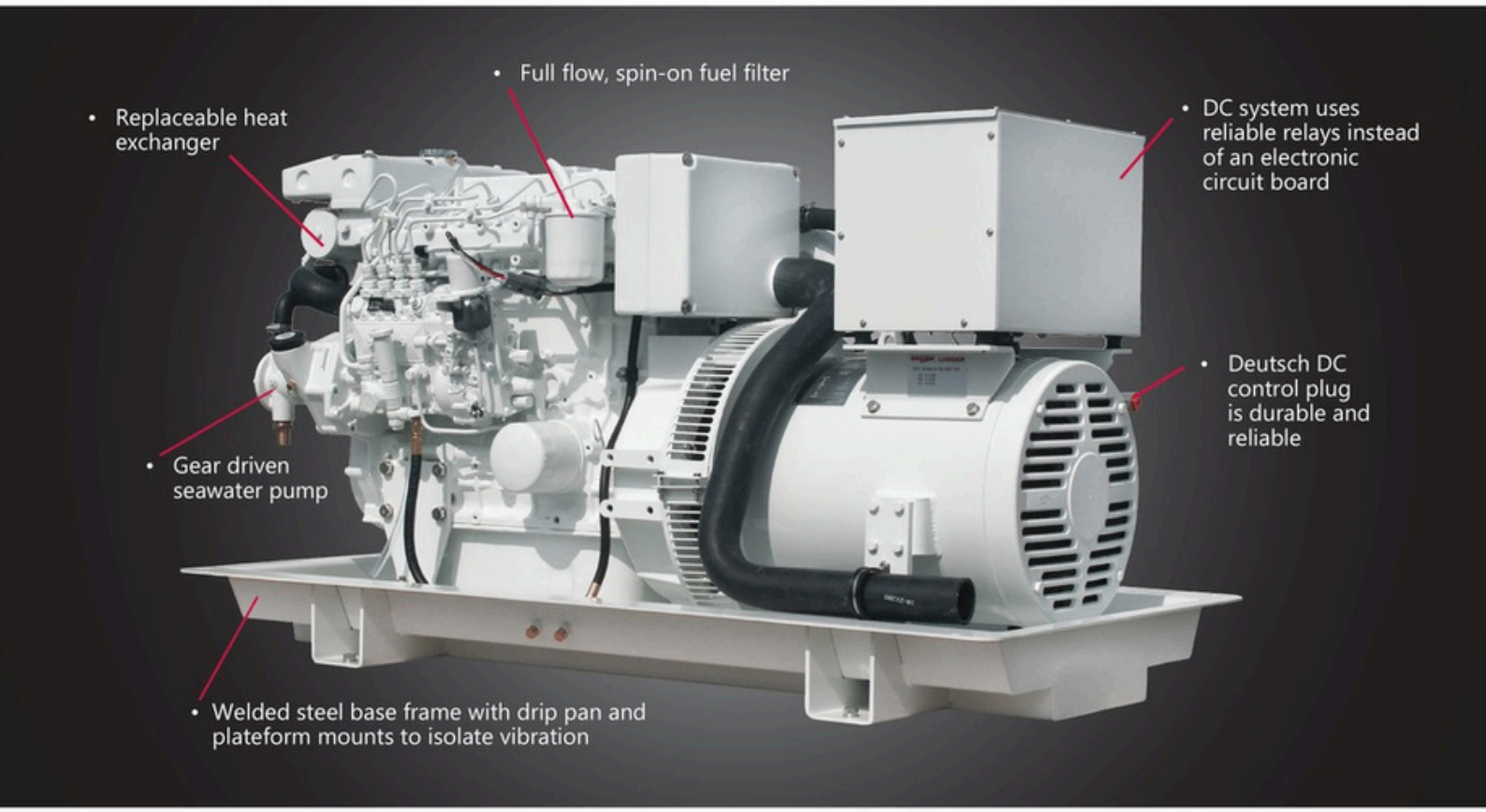
Wet exhaust elbow	3 inch (76 mm) OD
Raw water inlet	3/4 in (19 mm) OD
Fuel inlet and return	1/4 inch NPT

Information and dimensions are subject to change without notice.

NORTHERN LIGHTS

M944W3

30 kW (60 Hz, 1800 rpm)
26 kW (50 Hz, 1500 rpm)



SPECIFICATIONS AND DIMENSIONS

AC Output[1]

30 KW	60 Hz, 1800 RPM, 1 Ph, 1.0 PF, 120/240 V/125 A, 120 V/250 A
26 KW	50 Hz, 1500 RPM, 1 Ph, 1.0 PF, 220 V/118 A
Optional	Three Phase with 0.8 PF
Voltage regulation	±1%

1. Based on SAE J1995 and ISO 3046.

Weight and Height

Approximate wet weight	1331 lbs (604 kg)
Length	56.0 in (1422 mm)
Width	29.0 in (737 mm)
Height	30.7 in (779 mm)
Sound enclosure weight	158 lbs (72 kg)
Enclosure length	56.0 in (1422 mm)
Enclosure width	29.0 in (737 mm)
Enclosure height	31.5 in (800 mm)

Consult factory for classification society.

Engine Data

Type	Vertical inline 4 cylinder diesel
Displacement	203 in³ (3.3 ltr)
Bore/Stroke	3.70/4.72 in (94/120 mm)
HP @ RPM	49/1800 39/1500
Approximate fuel use [2]:	
1800 RPM @ full load	2.80 gph (9.80 lph)
1800 RPM @ half load	1.50 gph (5.30 lph)
1500 RPM @ full load	2.30 gph (7.41 lph)
1500 RPM @ half load	1.20 gph (4.16 lph)

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

Installation Data

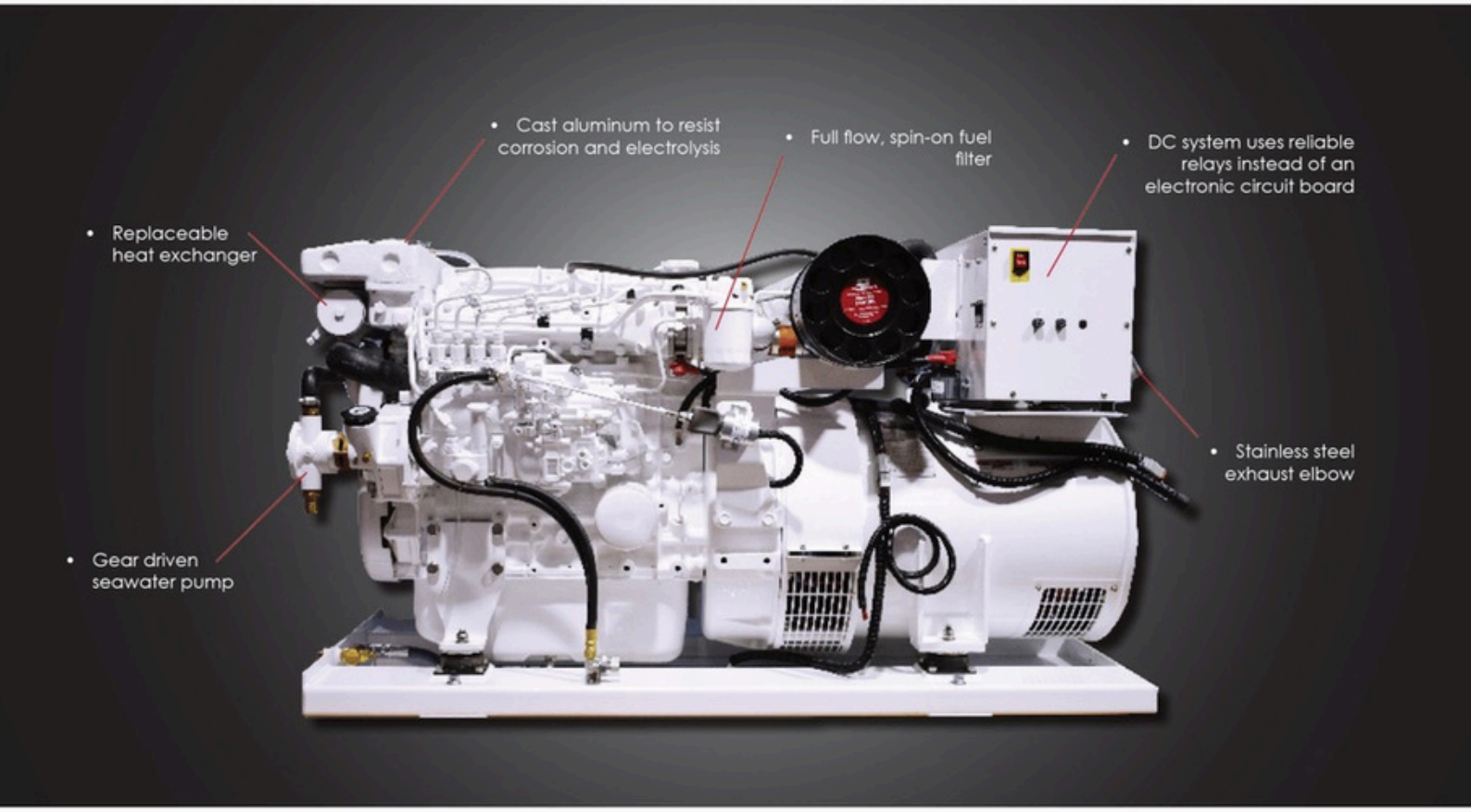
Wet exhaust elbow	3 inch (76 mm) OD
Raw water inlet	3/4 in (19 mm) OD
Fuel inlet and return	1/4 inch NPT

Information and dimensions are subject to change without notice.

NORTHERN LIGHTS®

M944T3FG

36 kW (60 Hz, 1800 rpm, 1ph)
38 kW (60 Hz, 1800 rpm, 3ph)



SPECIFICATIONS AND DIMENSIONS

AC Output[1]

36 KW	60 Hz, 1800 RPM 1 Phase: 120/240 VAC, 158.3 A, 120V/316.6 A
38 KW	3 Phase: 120/208 VAC, 131 A
Voltage regulation	±1%

1. Based on SAE J1995 and ISO 3046.

Weight and Height

Approximate dry weight	1443 lbs (654.5 kg)
Length	62.6 in (1509 mm)
Width	26.9 in (683 mm)
Height	31.7 in (805 mm)
Sound enclosure weight	98 lbs (44.4 kg)
Enclosure length	60.1 in (1527 mm)
Enclosure width	28.7 in (729 mm)
Enclosure height	32.1 in (815 mm)

Consult factory for classification society.

US EPA Tier III

Engine Data

Type	Vertical inline 4 cylinder diesel
Displacement	203 in³ (3.3 ltr)
Bore/Stroke	3.70/4.72 in (94/120 mm)
Aspiration	Turbocharged
HP @ RPM	60/1800
Approximate fuel use [2]:	
1800 RPM @ full load	3.26 gph (12.34 lph)
1800 RPM @ half load	1.60 gph (6.05 lph)
1500 RPM @ full load	2.33 gph (8.82 lph)
1500 RPM @ half load	1.33 gph (5.03 lph)

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

Installation Data

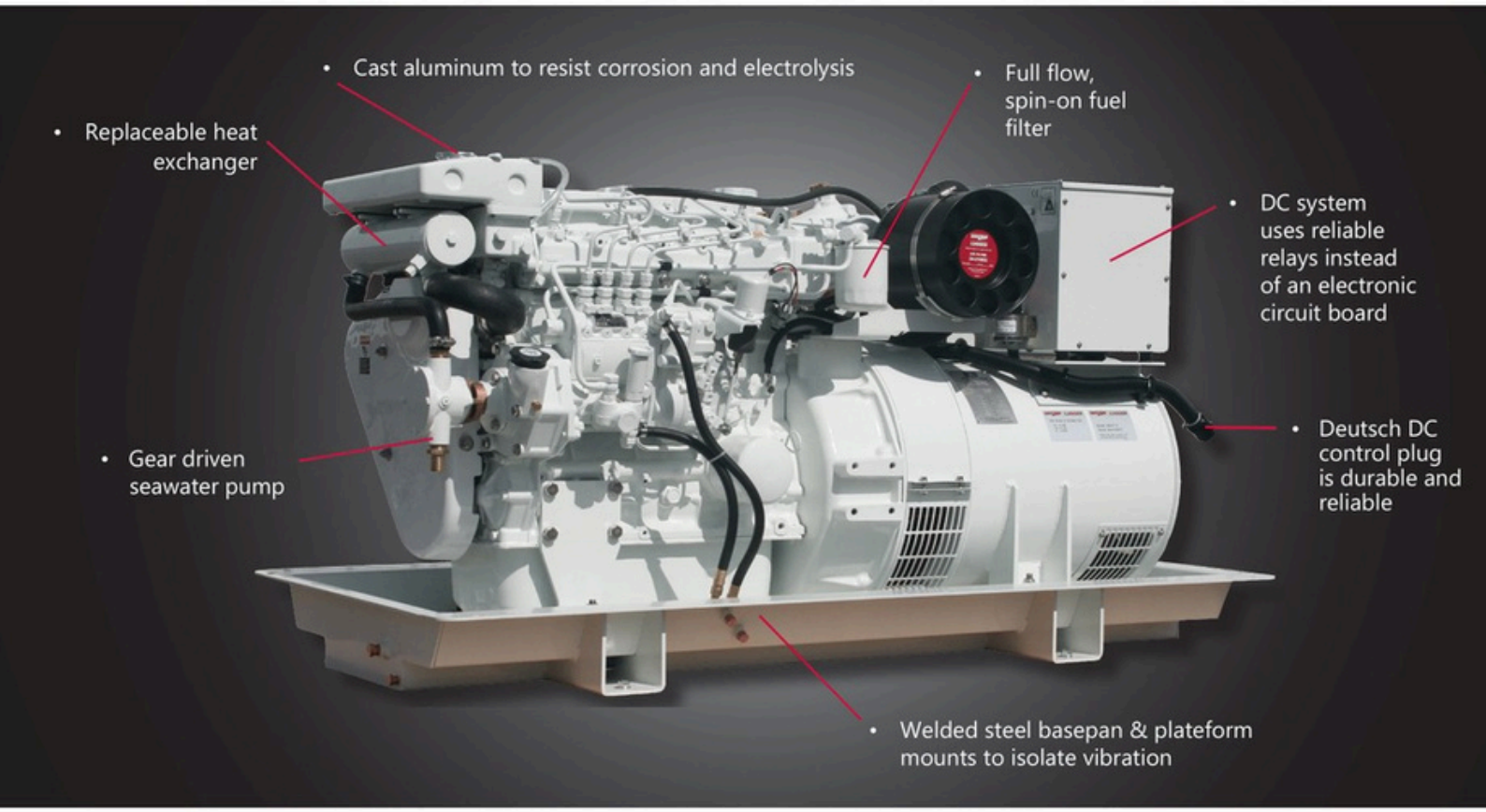
Wet exhaust elbow	3 inch (76 mm) OD
Raw water inlet	3/4 in (19 mm) OD
Fuel inlet	1/4 in NPT
Fuel return	1/4 in NPT

Information and dimensions are subject to change without notice.

NORTHERN LIGHTS

M944T

38 kW (60 Hz, 1800 rpm)
32 kW (50 Hz, 1500 rpm)



SPECIFICATIONS AND DIMENSIONS

AC Output[1]

38 KW	60 Hz, 1800 RPM 120/240 V/158.3 A, 120 V/316.6 A
32 KW	50 Hz, 1500 RPM 220 V/145 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	1450 lbs (657 kg)
Length	60.0 in (1524 mm)
Width	29.0 in (737 mm)
Height	30.5 in (775 mm)
Sound enclosure weight	140 lbs (64 kg)
Enclosure length	60.0 in (1524 mm)
Enclosure width	29.0 in (737 mm)
Enclosure height	32.0 in (813 mm)

Engine Data

Type	Vertical inline 4 cylinder diesel
Displacement	203 in^3 (3.3 ltr)
Bore/Stroke	3.70/4.72 in (94/120 mm)
Aspiration	Turbocharged
HP @ RPM	60/1800 50/1500
Approximate fuel use [2]:	
1800 RPM @ full load	3.26 gph (12.34 lph)
1800 RPM @ half load	1.60 gph (6.05 lph)
1500 RPM @ full load	2.33 gph (8.82 lph)
1500 RPM @ half load	1.33 gph (5.03 lph)

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

Installation Data

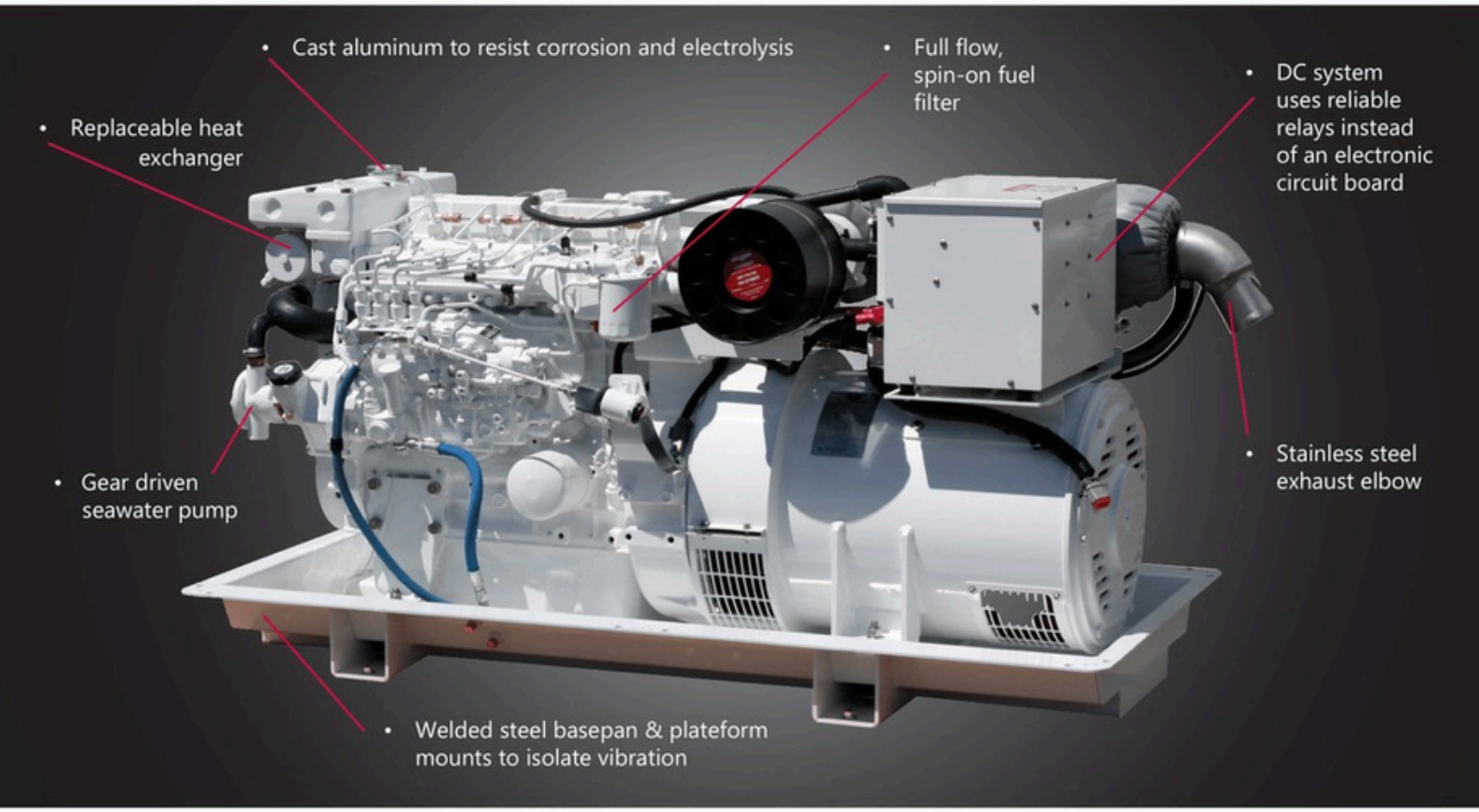
Wet exhaust elbow	3 inch (76 mm) OD
Raw water inlet	3/4 in (19 mm) OD
Fuel inlet and return	1/4 inch NPT

Consult factory for classification society.

Information and dimensions are subject to change without notice.

NORTHERN LIGHTS

M944T3F
38 kW (60 Hz, 1800 rpm)



SPECIFICATIONS AND DIMENSIONS

AC Output[1]

38 KW	60 Hz, 1800 RPM 120/240 V/158.3 A, 120 V/316.6 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	1480 lbs (671 kg)
Length	63.1 in (1602 mm)
Width	29.0 in (737 mm)
Height	30.5 in (775 mm)
Sound enclosure weight	140 lbs (64 kg)
Enclosure length	60.0 in (1524 mm)
Enclosure width	29.0 in (737 mm)
Enclosure height	32.0 in (813 mm)

Consult factory for classification society.

US EPA Tier III

Engine Data

Type	Vertical inline 4 cylinder diesel
Displacement	203 in^3 (3.3 ltr)
Bore/Stroke	3.70/4.72 in (94/120 mm)
Aspiration	Turbocharged
HP @ RPM	60/1800
Approximate fuel use [2]:	
1800 RPM @ full load	3.26 gph (12.34 lph)
1800 RPM @ half load	1.60 gph (6.05 lph)
1500 RPM @ full load	2.33 gph (8.82 lph)
1500 RPM @ half load	1.33 gph (5.03 lph)

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

Installation Data

Wet exhaust elbow	3 inch (76 mm) OD
Raw water inlet	3/4 in (19 mm) OD
Fuel inlet and return	1/4 inch NPT

Information and dimensions are subject to change without notice.

M944TG

38 kW (60 Hz, 1800 rpm, 3ph)
32 kW (50 Hz, 1500 rpm, 1 & 3ph)

SPECIFICATIONS AND DIMENSIONS

AC Output[1]

38 KW	60 Hz, 1800 RPM 120/240 V/158.3 A, 120 V/316.6 A
32 KW	50 Hz, 1500 RPM 220 V/145 A
Optional	Three phase with 0.8 PF
Voltage regulation	±1%

1. Based on SAE J1995 and ISO 3046.

Weight and Height

Approximate wet weight	1388 lbs (629.5 kg)
Length	56.4 in (1433 mm)
Width	25.7 in (654 mm)
Height	31.7 in (805 mm)
Sound enclosure weight	98 lbs (44.4 kg)
Enclosure length	60.1 in (1527 mm)
Enclosure width	28.7 in (729 mm)
Enclosure height	32.1 in (815 mm)

Consult factory for classification society.

Engine Data

Type	Vertical inline 4 cylinder diesel
Displacement	203 in^3 (3.3 ltr)
Bore/Stroke	3.70/4.72 in (94/120 mm)
Aspiration	Turbocharged
HP @ RPM	60/1800 50/1500
Approximate fuel use [2]:	
1800 RPM @ full load	3.26 gph (12.34 lph)
1800 RPM @ half load	1.60 gph (6.05 lph)
1500 RPM @ full load	2.33 gph (8.82 lph)
1500 RPM @ half load	1.33 gph (5.03 lph)

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

Installation Data

Wet exhaust elbow	3 inch (76 mm) OD
Raw water inlet	3/4 in (19 mm) OD
Fuel inlet	1/4 in NPT
Fuel return	1/4 in NPT

Information and dimensions are subject to change without notice.

M50C13

50 kW (60 Hz, 1800 rpm, 3ph)

SPECIFICATIONS AND DIMENSIONS

AC Output*	
60 Hz, 1800 RPM* kW	**50 kW**
Voltage regulation	1%
Frequency droop control	Isochronous 0%
Standard three phase power factor	0.8
Optional single phase power factor	1.0
Generator full load temperature rise (at 50°C ambient)	110°C
Inline cylinders/operating cycle**	I-4 / 4
Aspiration	Turbocharged
Displacement - cid (liter)	276 (4.5)
Bore/stroke - inches (mm)	4.19/5 (106/127)
Fuel injection pump type and control	Electronic (HPCR)
Oil fill capacity - gal (ltr)	4.7 (18)
Cooling System (Keel cooling standard, heat exchanger optional)	
Heat rejection to jacket water -1800 rpm BTU min	4,546
Freshwater pump capacity - 1800 rpm/gpm (lpm)***	30.9 (117)
Approximate cooling capacity - gal (ltr)	4.5 (17)
KC connection size in/out - inch	1.5
Heat exchanger approx. cooling capacity - gal (ltr)	3.7 (14)
Seawater pump capacity - 1800 rpm/gpm(lpm)	24 (91)
Max seawater pump suction head lift - ft (m)	10 (3)
Sea water pump inlet hose ID - in (mm)	1.25 (32)
Min. seawater inlet/discharge thru-hull - in (mm)	1.25 (32)
DC Electrical (12V standard, 24V optional)	
DC starting voltage - standard (optional)	12 (24)
Min battery capacity - amp hr/12V CCA (24V CCA)	200/1100 (750)
Starter rolling amps @ 0°C - 12VDC (24VDC)	920 (600)
12 Volt battery cable size up to 10 ft (3m)	2/0

Air (Based on standard three phase)	
Air consumption - 1800 rpm/cfm (m^3/m)	215 (6.1)
Approx heat radiated to air - 1800 rpm/BTU/min	595
Generator cooling air flow 1&3Ø - 1800 rpm cfm	595
Exhaust gas volume - 1800 rpm/cfm (m^3/m)	521 (14.7)
Exhaust gas temp - 1800 rpm/F° (C°)	846 (452)
Max. exhaust back Pressure - inch H^2O (mm H^2O)	30 (762)
Wet and exhaust elbow OD- in (mm)	4 (102)
Fuel	
Fuel injection pump type and control	HPCR
Min suction - in (mm)	3/8 (10)
Min return line - in (mm)	1/4 (6)
Max fuel transfer pump suction lift - in (mm)	80 (2032)
Max fuel flow to transfer pump at 1800 rpm - gph	19.5
Specific fuel consumption max load 1800 rpm - lbs.hp.hr	0.394
Approx. fuel rate[3] at 1800 RPM full load - gph (lph)****	4.1 (15.5)
Max Engine Operating Angle	
Continuous (with separate expansion tank)	30°
Intermittent (2 minutes)	45°
Dimensions and Weight	
Length - inches (mm)	64.9 (1648)
Width - inches (mm)	28.0 (711)
Height - inches (mm)	39.8 (1011)
Weight - pounds (kilograms)	2072 (940)

FEATURES AND BENEFITS

ENGINE BLOCK - Four cylinder, four cycle, in-line, liquid cooled, overhead valve, marine diesels based on heavy-duty 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. Dual gear-driven, counter-rotating balancing shafts for smooth operation. 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. Diaphragm-type, mechanical fuel transfer pump with manual priming lever.

LUBRICATION SYSTEM - Positive displacement gear-type oil pump. Full flow, spin-on oil filter. Oil spray cooling reduces piston crown temperature for longer life. 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 for safety.

COOLING SYSTEM - Keel cooled with heat exchanger option. Cast expansion tank. Two thermostats for quick warm-ups and safety. Cast-iron exhaust manifold for reliable temperature control.

DC ELECTRICAL SYSTEM - Negative ground, 12 volt DC system includes starter motor and alternator with regulator. Low oil pressure and high coolant temperature safety shutdown system. Optional control panels help you specify the amount and type of information required. Comprehensive list of optional alarms and safety shutdowns. Optional DC logic system for simplified maintenance. Optional pre-wired engine, panel with terminal strips.

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 110°/50° heat rise ratings. Engines and generators are torsionally matched for long life. Automatic voltage regulator; ±1% regulation over the entire range from no load to full load. Configured for isochronous frequency control with ECU electronic governor control.

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M50T13SL

50 kW (60 Hz, 1800 rpm)
50 kW (50 Hz, 1500 rpm)

FEATURES AND BENEFITS

ENGINE BLOCK
- EPA Tier III and IMO Tier II compliant
- Four cylinder, inline, 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 liners for long life and low rebuild costs.
- Bimetallic calves 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 rings reduces carbon buildup under light loads.
- A single ploy-vee drive belt powers the alternator and jacket water pump.

FUEL SYSTEMS
- High pressure common rail fuel injection for smooth, clean delivery.
- Direct fuel injection system.
- Ring clamp fuel filters with air bleed and drain.
- Diaphragm-type, mechanical fuel transfer pump with manual priming lever.

LUBRICATION SYSTEM
- Positive displacement gear-type oil pump.
- Full flow, spin-on oil filter.
- Oil spray cooling reduces piston crown temperature.
- Jacket water, plate-type, full flow oil cooler reduces heat and prevents lube oil breakdown.
- Large capacity oil pan.
- 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 housing for safety.

COOLING SYSTEM
- Heat exchanger with keel-cooled option.
- Gear driven seawater pump with self-priming flexible impeller. Bronze with stainless steel shaft.
- Cast-iron expansion tank.
- Two thermostats for quick warm-ups and safety.
- Cast-iron exhaust manifold for reliable temperature control.

ESP AND DC ELECTRICAL SYSTEM
- Negative ground, 12 volt DC system has circuit breaker, starter motor and alternator with regulator.
- Low oil pressure and high coolant temperature safety shutdowns.
- Optional control panels help you specify the amount and type of information required. Comprehensive list of optional alarms and safety shutdowns.
- Optional DC logic system for simplified maintenance.
- Optional pre-wired engine, panel with terminal strips.

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. PMG is standard equipment.
- Engines and generators are torsionally matched for long life.
- Automatic voltage regulator, ± 1% regulation over the entire range from no load to full load.
- Configured for 0% isochronous droop with integral electronic governor control supplied by ECU.

SPECIAL EQUIPMENT
- Welded steel base frame.
- Sparkling white polyurethane paint.
- Operator's and parts manuals.
- Optional sound enclosure for industry best sound and vibration attenuation in a compact design.

AC Output	M50T13SL	M50T13SL
60 Hz, 1800 RPM, kW	**50 kW**	
50 Hz, 1500 RPM, kW		**50 kW**
Voltage Regulation	1%	1%
Volts/Amps	208/139	380/76
Frequency Droop Control	Isochronous 0%	
Phase and Power Factor	Three Phase 0.8 Power Factor std.	
	Opt.: Single Phase - 1.0 Power Factor	
Generator Full Load Temp. Rise	90°C Temperature Rise at 50°C Ambient	
Lugger Diesel Engine Data		
Inline Cylinders/Aspiration/Operating Cycle	I-4/Turbocharged/4	I-4/Turbocharged/4
Displacement - in^3 (ltr)	276 (4.5)	276 (4.5)
Bore/Stroke - in (mm)	4.19/5 (106/127)	4.19/5 (106/127)
Cooling System - Heat Exchange Standard, Keel-Cooling Optional		
Heat Rejection to Jacket Water - rpm BTU min	3984	3984
Freshwater Pump Capacity - rpm/gpm (lpm)	30.9 (117)	21.9 (82.9)
Heat Exchanger Approx. Cooling Capacity - gal (ltr)	3.7 (14)	3.7 (14)
Keel-Cool Approx. Cooling Capacity - gal (ltr)	4.5 (17)	4.5 (17)
Seawater Pump Capacity - rpm/gpm (lpm)	24 (90)	20 (76)
Max. Seawater Pump Suction Head Lift - ft (m)	10 (3)	10 (3)
Seawater Pump Inlet Hose ID - in (mm)	1.2 (32)	1.2 (32)
Min. Seawater Inlet/Discharge Thru-Hull - in (mm)	1.2 (32)	1.2 (32)
DC Electrical		
DC Starting Voltage - standard (optional)	12 (24)	12 (24)
Min. Battery Capacity - amp hr 12V (24V)	625 (500)	625 (500)
Min. Battery Size CCA - 12V (24V)	1100 (750)	110 (750)
Starter Rolling Amps @ 0°C - 12V DC (24V DC)	920 (600)	920 (600)
12 Volt Battery Cable Size Up to 10ft (3m)	2/0	2/0
Air		
Air Consumption - rpm/cfm/ (m^3/m)	215 (6.1)	148 (4.2)
Approximate Heat Radiated to Air - rpm/BTU/min	474	474
Generator Cooling Air Flow 1&3Ø - rpm cfm	700	575
Exhaust Gas Volume - rpm/cfm (m^3/m)	521 (14.7)	371 (10.5)
Exhaust Gas Temp. - rpm/F° (C°)	846 (452)	900 (482)
Max. Exhaust Back Pressure - in H^2O (mm H^2O)	30 (762)	30 (762)
Wet Exhaust Elbow OD - in (mm)	4 (102)	4 (102)
Dry Exhaust Elbow - in (mm)	4 (102)	4 (102)
Fuel		
Fuel Injection Pump type and Control	Electronic (HPCR)	Electronic (HPCR)
Min. Suction - in (mm)	3/8 (10)	3/8 (10)
Min. Return Line - in (mm)	1/4 (6.4)	1/4 (6.4)
Max. Fuel Transfer Pump Suction Lift - in (m)	80 (2)	80 (2)
Max. Fuel Flow to Transfer Pump RPM - gph	19.5	18.8
Specific Fuel Consumption Max. Load RPM - lbs. hp. hr	0.394	0.381
Approx. Fuel Rate at RPM Fuel Load - gph (lph)	4.3 (16.3)	3.9 (14.6)
Fuel Supply and Return - Max Pressure PSI. Height - ft (m)	2.9	2.9
Fuel Supply and Return Height - in (m)	80 (2)	80 (2)
Max Engine Operating Angle		
Continuous (with Separate Expansion Tank)	30°	30°
Intermittent (2 Minutes)	45°	45°
Dimensions and Weight - Low Profile; Do not use for installation. Contact Factory for installation drawings and info.		
Length - in (mm)	76.75 (1949)	76.75 (1949)
Width - in (mm)	38.00 (965)	38.00 (965)
Height - in (mm)	39.31 (998)	39.31 (998)
Weight - lbs (kg)	2749 (1247)	2749 (1247)
Dimensions and Weight - Optional Enclosure; Do not use for installation. Contact Factory for installation drawings and info.		
Length - in (mm)	77.53 (1969)	77.53 (1969)
Width - in (mm)	38.00 (965)	38.00 (965)
Height - in (mm)	40.90 (1039)	40.90 (1039)
Weight - lbs (kg)	3170 (1438)	3170 (1438)

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M65/55T13SL

65 kW (60 Hz, 1800 rpm)
55 kW (50 Hz, 1500 rpm)

FEATURES AND BENEFITS

ENGINE BLOCK
- EPA Tier III and IMO Tier II compliant
- Four cylinder, 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 liners for long life and low rebuild costs.
- Bimetallic calves 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 rings reduces carbon buildup under light loads.
- A single ploy-vee drive belt powers the alternator and jacket water pump.

FUEL SYSTEMS
- High pressure common rail fuel injection for smooth, clean delivery.
- Direct fuel injection system.
- Ring clamp fuel filters with air bleed and drain.
- Diaphragm-type, mechanical fuel transfer pump with manual priming lever.

LUBRICATION SYSTEM
- Positive displacement gear-type oil pump.
- Full flow, spin-on oil filter.
- Oil spray cooling reduces piston crown temperature.
- Jacket water, plate-type, full flow oil cooler reduces heat and prevents lube oil breakdown.
- Large capacity oil pan.
- 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 housing for safety.

COOLING SYSTEM
- Heat exchanger with keel-cooled option.
- Gear driven seawater pump with self-priming flexible impeller. Bronze with stainless steel shaft.
- Cast-iron expansion tank.
- Two thermostats for quick warm-ups and safety.
- Cast-iron exhaust manifold for reliable temperature control.

ESP AND DC ELECTRICAL SYSTEM
- Negative ground, 12 volt DC system has circuit breaker, starter motor and alternator with regulator.
- Low oil pressure and high coolant temperature safety shutdowns.
- Optional control panels help you specify the amount and type of information required. Comprehensive list of optional alarms and safety shutdowns.
- Optional DC logic system for simplified maintenance.
- Optional pre-wired engine, panel with terminal strips.

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. PMG is standard equipment.
- Engines and generators are torsionally matched for long life.
- Automatic voltage regulator, ± 1% regulation over the entire range from no load to full load.
- Configured for 0% isochronous droop with integral electronic governor control supplied by ECU.

SPECIAL EQUIPMENT
- Welded steel base frame.
- Sparkling white polyurethane paint.
- Operator's and parts manuals.
- Optional sound enclosure for industry best sound and vibration attenuation in a compact design.

AC Output	M65T13SL	M55T13SL
60 Hz, 1800 RPM, kW	**65 kW**	
50 Hz, 1500 RPM, kW		**55 kW**
Voltage Regulation	1%	1%
Volts/Amps	208/139	380/76
Frequency Droop Control	Isochronous 0%	
Phase and Power Factor	Three Phase 0.8 Power Factor std.	
	Opt.: Single Phase - 1.0 Power Factor	
Generator Full Load Temp. Rise	90°C Temperature Rise at 50°C Ambient	
Lugger Diesel Engine Data		
Inline Cylinders/Aspiration/Operating Cycle	I-4/Turbocharged/4	I-4/Turbocharged/4
Displacement - in^3 (ltr)	276 (4.5)	276 (4.5)
Bore/Stroke - in (mm)	4.19/5 (106/127)	4.19/5 (106/127)
Cooling System - Heat Exchange Standard, Keel-Cooling Optional		
Heat Rejection to Jacket Water - rpm BTU min	4548	3984
Freshwater Pump Capacity - rpm/gpm (lpm)	30.9 (117)	21.9 (82.9)
Heat Exchanger Approx. Cooling Capacity - gal (ltr)	3.7 (14)	3.7 (14)
Keel-Cool Approx. Cooling Capacity - gal (ltr)	4.5 (17)	4.5 (20)
Seawater Pump Capacity - rpm/gpm (lpm)	24 (90)	20 (76)
Max. Seawater Pump Suction Head Lift - ft (m)	10 (3)	10 (3)
Seawater Pump Inlet Hose ID - in (mm)	1.25 (32)	1.25 (32)
Min. Seawater Inlet/Discharge Thru-Hull - in (mm)	1.25 (32)	1.25 (32)
DC Electrical		
DC Starting Voltage - standard (optional)	12 (24)	12 (24)
Min. Battery Capacity - amp hr 12V (24V)	625 (500)	625 (500)
Min. Battery Size CCA - 12V (24V)	1100 (750)	110 (750)
Starter Rolling Amps @ 0°C - 12V DC (24V DC)	920 (600)	920 (600)
12 Volt Battery Cable Size Up to 10ft (3m)	2/0	2/0
Air		
Air Consumption - rpm/cfm/ (m^3/m)	215 (6.1)	148 (4.2)
Approximate Heat Radiated to Air - rpm/BTU/min	474	474
Generator Cooling Air Flow 1&3Ø - rpm cfm	700	575
Exhaust Gas Volume - rpm/cfm (m^3/m)	521 (14.7)	371 (10.5)
Exhaust Gas Temp. - rpm/F° (C°)	846 (452)	900 (482)
Max. Exhaust Back Pressure - in H^2O (mm H^2O)	30 (762)	30 (762)
Wet Exhaust Elbow OD - in (mm)	4 (102)	4 (102)
Dry Exhaust Elbow - in (mm)	4 (102)	4 (102)
Fuel		
Fuel Injection Pump type and Control	Electronic (HPCR)	Electronic (HPCR)
Min. Suction - in (mm)	3/8 (10)	3/8 (10)
Min. Return Line - in (mm)	1/4 (6.4)	1/4 (6.4)
Max. Fuel Transfer Pump Suction Lift - in (m)	80 (2)	80 (2)
Max. Fuel Flow to Transfer Pump RPM - gph	19.5	18.8
Specific Fuel Consumption Max. Load RPM - lbs. hp. hr	0.394	0.381
Approx. Fuel Rate at RPM Fuel Load - gph (lph)	5.5 (20.8)	4.4 (16.6)
Fuel Supply and Return - Max Pressure PSI. Height - ft (m)	2.9	2.9
Fuel Supply and Return Height - in (m)	80 (2)	80 (2)
Max Engine Operating Angle		
Continuous (with Separate Expansion Tank)	30°	30°
Intermittent (2 Minutes)	45°	45°
Dimensions and Weight - Low Profile; Do not use for installation. Contact Factory for installation drawings and info.		
Length - in (mm)	76.75 (1949)	76.75 (1949)
Width - in (mm)	38.00 (965)	38.00 (965)
Height - in (mm)	39.31 (998)	39.31 (998)
Weight - lbs (kg)	2695 (1222)	2695 (1222)
Dimensions and Weight - Optional Enclosure; Do not use for installation. Contact Factory for installation drawings and info.		
Length - in (mm)	77.53 (1969)	77.53 (1969)
Width - in (mm)	38.00 (965)	38.00 (965)
Height - in (mm)	40.90 (1039)	40.90 (1039)
Weight - lbs (kg)	3115 (1413)	3115 (1413)

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M80A13SL

80 kW (60 Hz, 1800 rpm)
80 kW (50 Hz, 1500 rpm)

FEATURES AND BENEFITS

ENGINE BLOCK
- EPA Tier III and IMO Tier II compliant
- Four cylinder, inline, 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 liners for long life and low rebuild costs.
- Bimetallic calves 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 rings reduces carbon buildup under light loads.
- A single ploy-vee drive belt powers the alternator and jacket water pump.

FUEL SYSTEMS
- High pressure common rail fuel injection for smooth, clean delivery.
- Direct fuel injection system.
- Ring clamp fuel filters with air bleed and drain.
- Diaphragm-type, mechanical fuel transfer pump with manual priming lever.

LUBRICATION SYSTEM
- Positive displacement gear-type oil pump.
- Full flow, spin-on oil filter.
- Oil spray cooling reduces piston crown temperature.
- Jacket water, plate-type, full flow oil cooler reduces heat and prevents lube oil breakdown.
- Large capacity oil pan.
- 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 housing for safety.

COOLING SYSTEM
- Heat exchanger with keel-cooled option.
- Gear driven seawater pump with self-priming flexible impeller. Bronze with stainless steel shaft.
- Cast-iron expansion tank.
- Two thermostats for quick warm-ups and safety.
- Cast-iron exhaust manifold for reliable temperature control.

ESP AND DC ELECTRICAL SYSTEM
- Negative ground, 12 volt DC system has circuit breaker, starter motor and alternator with regulator.
- Low oil pressure and high coolant temperature safety shutdowns.
- Optional control panels help you specify the amount and type of information required. Comprehensive list of optional alarms and safety shutdowns.
- Optional DC logic system for simplified maintenance.
- Optional pre-wired engine, panel with terminal strips.

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. PMG is standard equipment.
- Engines and generators are torsionally matched for long life.
- Automatic voltage regulator, ± 1% regulation over the entire range from no load to full load.
- Configured for 0% isochronous droop with integral electronic governor control supplied by ECU.

SPECIAL EQUIPMENT
- Welded steel base frame.
- Sparkling white polyurethane paint.
- Operator's and parts manuals.
- Optional sound enclosure for industry best sound and vibration attenuation in a compact design.

AC Output	M80A13SL	M80A13SL
60 Hz, 1800 RPM, kW	**80 kW**	
50 Hz, 1500 RPM, kW		**80 kW**
Voltage Regulation	1%	1%
Volts/Amps	208/139	380/76
Frequency Droop Control	Isochronous 0%	
Phase and Power Factor	Three Phase 0.8 Power Factor std.	
	Opt.: Single Phase - 1.0 Power Factor	
Generator Full Load Temp. Rise	90°C Temperature Rise at 50°C Ambient	
Lugger Diesel Engine Data		
Inline Cylinders/Aspiration/Operating Cycle	I-4/Turbo & Aftercooled/4	
Displacement - in^3 (ltr)	276 (4.5)	276 (4.5)
Bore/Stroke - in (mm)	4.19/5 (106/127)	4.19/5 (106/127)
Cooling System - Heat Exchange Standard, Keel-Cooling Optional		
Heat Rejection to Jacket Water - rpm BTU min	5863	5863
Freshwater Pump Capacity - rpm/gpm (lpm)	40.9 (155)	36 (136)
Heat Exchanger Approx. Cooling Capacity - gal (ltr)	4.4 (17)	4.4 (17)
Keel-Cool Approx. Cooling Capacity - gal (ltr)	5.2 (20)	5.2 (20)
Seawater Pump Capacity - rpm/gpm (lpm)	52 (197)	41 (155)
Max. Seawater Pump Suction Head Lift - ft (m)	10 (3)	10 (3)
Seawater Pump Inlet Hose ID - in (mm)	2 (51)	2 (51)
Min. Seawater Inlet/Discharge Thru-Hull - in (mm)	2 (51)	2 (51)
DC Electrical		
DC Starting Voltage - standard (optional)	12 (24)	12 (24)
Min. Battery Capacity - amp hr 12V (24V)	625 (500)	625 (500)
Min. Battery Size CCA - 12V (24V)	1100 (750)	110 (750)
Starter Rolling Amps @ 0°C - 12V DC (24V DC)	920 (600)	920 (600)
12 Volt Battery Cable Size Up to 10ft (3m)	2/0	2/0
Air		
Air Consumption - rpm/cfm/ (m^3/m)	301 (8.5)	209 (5.9)
Approximate Heat Radiated to Air - rpm/BTU/min	689	689
Generator Cooling Air Flow 1&3Ø - rpm cfm	700	575
Exhaust Gas Volume - rpm/cfm (m^3/m)	685 (19.4)	519 (14.7)
Exhaust Gas Temp. - rpm/F° (C°)	813 (434)	910 (488)
Max. Exhaust Back Pressure - in H^2O (mm H^2O)	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	Electronic (HPCR)	Electronic (HPCR)
Min. Suction - in (mm)	3/8 (10)	3/8 (10)
Min. Return Line - in (mm)	1/4 (6.4)	1/4 (6.4)
Max. Fuel Transfer Pump Suction Lift - in (m)	80 (2)	80 (2)
Max. Fuel Flow to Transfer Pump RPM - gph	19.5	18.8
Specific Fuel Consumption Max. Load RPM - lbs. hp. hr	0.394	0.381
Approx. Fuel Rate at RPM Fuel Load - gph (lph)	6.7 (25.4)	6.4 (24.1)
Fuel Supply and Return - Max Pressure PSI. Height - ft (m)	2.9	2.9
Fuel Supply and Return Height - in (m)	80 (2)	80 (2)
Max Engine Operating Angle		
Continuous (with Separate Expansion Tank)	30°	30°
Intermittent (2 Minutes)	45°	45°
Dimensions and Weight - Low Profile; Do not use for installation. Contact Factory for installation drawings and info.		
Length - in (mm)	76.75 (1949)	76.75 (1949)
Width - in (mm)	38.00 (965)	38.00 (965)
Height - in (mm)	39.31 (998)	39.31 (998)
Weight - lbs (kg)	2749 (1247)	2749 (1247)
Dimensions and Weight - Optional Enclosure; Do not use for installation. Contact Factory for installation drawings and info.		
Length - in (mm)	77.53 (1969)	77.53 (1969)
Width - in (mm)	38.00 (965)	38.00 (965)
Height - in (mm)	40.90 (1039)	40.90 (1039)
Weight - lbs (kg)	3170 (1438)	3170 (1438)

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M99A13SL

99 kW (60 Hz, 1800 rpm)

FEATURES AND BENEFITS

ENGINE BLOCK
- EPA Tier III and IMO Tier II compliant
- Four cylinder, 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 liners for long life and low rebuild costs.
- Bimetallic calves 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 rings reduces carbon buildup under light loads.
- A single ploy-vee drive belt powers the alternator and jacket water pump.

FUEL SYSTEMS
- High pressure common rail fuel injection for smooth, clean delivery.
- Direct fuel injection system.
- Ring clamp fuel filters with air bleed and drain.
- Diaphragm-type, mechanical fuel transfer pump with manual priming lever.

LUBRICATION SYSTEM
- Positive displacement gear-type oil pump.
- Full flow, spin-on oil filter.
- Oil spray cooling reduces piston crown temperature.
- Jacket water, plate-type, full flow oil cooler reduces heat and prevents lube oil breakdown.
- Large capacity oil pan.
- 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 housing for safety.

COOLING SYSTEM
- Heat exchanger with keel-cooled option.
- Gear driven seawater pump with self-priming flexible impeller. Bronze with stainless steel shaft.
- Cast-iron expansion tank.
- Two thermostats for quick warm-ups and safety.
- Cast-iron exhaust manifold for reliable temperature control.

ESP AND DC ELECTRICAL SYSTEM
- Negative ground, 12 volt DC system has circuit breaker, starter motor and alternator with regulator.
- Low oil pressure and high coolant temperature safety shutdowns.
- Optional control panels help you specify the amount and type of information required. Comprehensive list of optional alarms and safety shutdowns.
- Optional DC logic system for simplified maintenance.
- Optional pre-wired engine, panel with terminal strips.

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. PMG is standard equipment.
- Engines and generators are torsionally matched for long life.
- Automatic voltage regulator, ±1% regulation over the entire range from no load to full load.
- Configured for 0% isochronous droop with integral electronic governor control supplied by ECU.

SPECIAL EQUIPMENT
- Welded steel base frame.
- Sparkling white polyurethane paint.
- Operator's and parts manuals.
- Optional sound enclosure for industry best sound and vibration attenuation in a compact design.

AC Output	M99A13SL
60 Hz, 1800 RPM, kW	**99 kW**
Voltage Regulation	1%
Frequency Droop Control	Isochronous 0%
Phase and Power Factor	Three Phase 0.8 Power Factor std.
Generator Full Load Temp. Rise	90°C Temperature Rise at 50°C Ambient
Lugger Diesel Engine Data	
Inline Cylinders/Aspiration/Operating Cycle	I-4/Turbo & Aftercooled/4
Displacement - in^3 (ltr)	276 (4.5)
Bore/Stroke - in (mm)	4.19/5 (106/127)
Cooling System - Heat Exchange Standard, Keel-Cooling Optional	
Heat Rejection to Jacket Water - rpm BTU min	7001
Freshwater Pump Capacity - rpm/gpm (lpm)	40.9 (155)
Heat Exchanger Approx. Cooling Capacity - gal (ltr)	4.4 (17)
Keel-Cool Approx. Cooling Capacity - gal (ltr)	5.2 (20)
Seawater Pump Capacity - rpm/gpm (lpm)	52 (197)
Max. Seawater Pump Suction Head Lift - ft (m)	10 (3)
Seawater Pump Inlet Hose ID - in (mm)	2 (51)
Min. Seawater Inlet/Discharge Thru-Hull - in (mm)	2 (51)
DC Electrical	
DC Starting Voltage - standard (optional)	12 (24)
Min. Battery Capacity - amp hr 12V (24V)	625 (500)
Min. Battery Size CCA - 12V (24V)	1100 (750)
Starter Rolling Amps @ 0°C - 12V DC (24V DC)	920 (600)
12 Volt Battery Cable Size Up to 10ft (3m)	2/0
Air	
Air Consumption - rpm/cfm/ (m^3/m)	301 (8.5)
Approximate Heat Radiated to Air - rpm/BTU/min	826
Generator Cooling Air Flow 1&3Ø - rpm cfm	700
Exhaust Gas Volume - rpm/cfm (m^3/m)	685 (19.4)
Exhaust Gas Temp. - rpm/F° (C°)	813 (434)
Max. Exhaust Back Pressure - in H^2O (mm H^2O)	30 (762)
Wet Exhaust Elbow OD - in (mm)	5 (127)
Dry Exhaust Elbow - in (mm)	4 (102)
Fuel	
Fuel Injection Pump type and Control	Electronic (HPCR)
Min. Suction - in (mm)	3/8 (10)
Min. Return Line - in (mm)	1/4 (6.4)
Max. Fuel Transfer Pump Suction Lift - in (mm)	80 (2)
Max. Fuel Flow to Transfer Pump RPM - gph	19.5
Specific Fuel Consumption Max. Load RPM - lbs. hp. hr	0.394
Approx. Fuel Rate at RPM Fuel Load - gph (lph)	6.4 (24.1)
Fuel Supply and Return - Max Pressure PSI. Height - ft (m)	2.9
Fuel Supply and Return Height - in (m)	80 (2)
Max Engine Operating Angle	
Continuous (with Separate Expansion Tank)	30°
Intermittent (2 Minutes)	45°
Dimensions and Weight - Low Profile; Do not use for installation. Contact Factory for installation drawings and info.	
Length - in (mm)	76.75 (1949)
Width - in (mm)	38.00 (965)
Height - in (mm)	39.31 (998)
Weight - lbs (kg)	2749 (1247)
Dimensions and Weight - Optional Enclosure; Do not use for installation. Contact Factory for installation drawings and info.	
Length - in (mm)	77.53 (1969)
Width - in (mm)	38.00 (965)
Height - in (mm)	40.90 (1039)
Weight - lbs (kg)	3170 (1438)

ISO 9001

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M116A13L

FEATURES AND BENEFITS

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 operation.
- 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 for safety.
- 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 control.

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 life.
- Automatic voltage regulator; ±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
- IMO Tier 3 exempt
- 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 two-part polyurethane paint
- Operator's and parts manuals

AC Output *		
60 Hz, 1800 RPM	**116 kW**	
50 Hz, 1500 RPM	**116 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		
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	9,580	7,980
Freshwater pump capacity - gpm (lpm)	52.0 (197)	42.9 (162)
Approximate coolant capacity - gal (ltr)	9.0 (34)	9.0 (34)
Seawater Pump Flow - gpm(lpm)	51 (192)	43 (162)
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 (m^3/m)	510 (14.4)	325 (9.2)
Approx heat radiated to air - BTU/min (kW)	1,085 (19)	966 (17)
Generator cooling air flow 1 & 3 Ø - cfm (m^3/m)	1,100(31)	915 (26)
Exhaust gas volume - cfm (m^3/m)	1,036 (29.3)	747 (21.2)
Exhaust gas temp - F° (C°)	694 (368)	822 (439)
Max. exhaust back pressure - inch H^2O (mm H^2O)	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 line size - in (mm)	0.31 (8)	
Min return line size - 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 full load 60 hz - lbs/hp-hr	0.411	
Specific fuel consumption full load 50 hz - lbs/hp-hr	0.365	
Approx. fuel rate** at 60 Hz full load - gph (lph)	10.0 (38.0)	
Approx. fuel rate** at 50 Hz full load - gph (lph)	8.9 (33.8)	
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)
Weight - pounds (kilograms)	3405 (1544)	4122 (1869)

*. 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.

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

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LRQA CERTIFIED ISO 9001

M150A13

FEATURES AND BENEFITS

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 operation.
- 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 for safety.
- 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 control.

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 life.
- Automatic voltage regulator; ±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 two-part polyurethane paint
- Operator's and parts manuals

AC Output *		
60 Hz, 1800 RPM kW	**150 kW**	
50 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		
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 - 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 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 (m^3/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 (m^3/m)	1,100(31)	915 (26)
Exhaust gas volume - cfm (m^3/m)	1,123 (32)	828 (23)
Exhaust gas temp - F° (C°)	703 (373)	849 (454)
Max. exhaust back pressure - inch H^2O (mm H^2O)	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)	38.3 (973)	42.0 (1067)
Height - inches (mm)	39.84 (1012)	42.0 (1067)
Weight - pounds (kilograms)	3495 (1585)	4212 (1911)

*. 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.

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

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M1266 SERIES

IMO Tier 2
205/310/415 kW, 60 Hz @ 1800 RPM
180/260/355 kW, 50 Hz @ 1500 RPM

IMO Tier 3
275/385 kW, 60 Hz @ 1800 RPM
275/340 kW, 50 Hz @ 1500 RPM

FEATURES AND BENEFITS

THE STATE-OF-THE ART IN MARINE EQUIPMENT

The growing demands of the marine marketplace demand a big, robust power producer. As the world's yachts grow more sophisticated, their power generation system must keep pace. Northern Lights generator sets are based on world-class components - including industrial strength base engines and generator ends. Our exclusive marinization process ensures reliable, clean power no matter what your vessel requires.

FLEXIBILITY

Northern Lights' revolutionary base frame design creates the most compact, best looking power generation set on the market. Our optional sound enclosures and compound mounts save even more space and virtually eliminate vibration noise. Northern Lights provides maximize power efficiency while using minimal engine room space.

ELECTRONIC CONTROL SYSTEM

For the ultimate in system management and monitoring, the M1266 series generator sets are equipped with an Electronic Control Unit (ECU). The ECU controls the electronic engine functions and provides a SAE J1939 data stream of engine information that can be displayed on an optional system monitor panel.

SUPERIOR PMG GENERATOR ENDS

Northern Lights generator ends achieve ±0.5% voltage regulation. All have low temperature rise ratings to meet or exceed marine requirements. All M1266's have Permanent Magnet Generators for 300% short circuit capability required for classed vessels.

COMPLETE UNIT TESTING

Northern Lights generator sets are thoroughly factory tested and go through a complete quality control program to ensure your satisfaction with the best built marine generator on the market today.

COMPONENT SPECIFIC FEATURES

ENGINE BLOCK

- Six cylinder, four cycle, in-line, liquid cooled, overhead valve, marine diesels based on heavy-duty industrial engine blocks
- Balanced alloy steel and induction hardened crankshaft
- Replaceable valve seats and guides
- Strong three ring steel pistons for long-life reliability
- Gear-driven seawater pump and freshwater pump
- Drive belt powers the alternator
- Replaceable, strength-optimized wet cylinder liners for long life and low rebuild costs

FUEL SYSTEM

- Electronically controlled high-pressure fuel injection system provides individual control in each cylinder for low exhaust emissions and superior fuel economy.
- High torque at low revolutions. (1800 or 1500 rpm)
- Full flow spin-on duplex elements
- Gear driven fuel transfer pump with primer
- Flexible fuel lines routed to fuel manifold on base frame for easy installation of vessel's hard piping

LUBRICATION SYSTEM

- 600 hour oil change interval when fuel and oil requirements are met
- Force feed lubricating by gear oil pump
- Full flow, spin-on oil filter
- Centrifugal oil cleaner to extend oil change intervals
- Freshwater, plate-type, full flow oil cooler reduces heat and thermal breakdown of lube oil
- Large capacity oil pan
- Floating, cast aluminum, rocker cover
- Lube oil drain for easy changes

AIR SYSTEM-TURBO AND AFTERCOOLER

- Dry air filter silences intake noise
- Aftercooler with marine quality, cupro-nickel, single pass element
- Turbocharged for increased output

COOLING SYSTEM

- Freshwater cooling system with three thermostats for quicker warm-ups
- Heat exchanger cooling includes: Gear driven, flexible impeller seawater pump.
- Cast aluminum expansion tank with brass filler neck. Cast-iron exhaust manifold has single pass freshwater flow for even temperature control, fast warm-up and no hot spots
- Titanium plate exchanger - no zinc anode protection necessary

DC ELECTRICAL SYSTEM

- Engine supplies SAE J1939 data stream through a CAN bus plug for optional engine monitor
- Negative ground, 24 volt DC system with circuit breaker, starter motor and battery charging alternator with regulator. Isolated ground optional
- Standard digital controller displays engine hours, coolant temperature, oil pressure, DC voltage, and includes start-stop controls. Increased ease of paralleling through controller
- Engine and panel are pre-wired with terminal strips
- Low oil pressure and high coolant temperature safety shutdown system included in controller

AC GENERATOR

- Direct coupled, single bearing, 12 lead, reconnectable AC generator. Maintenance free brushless design
- Generators meet or exceed class society standards. All have 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 life
- Automatic voltage regulator gives fast response to electrical load changes. Voltage is regulated to ±0.5% (one half of one percent) over the entire range from no load to full load
- Isochronous electronic governor for 0% AC frequency droop
- PMG (permanent magnet generator) to power AVR for 300% short circuit capability for "classed" vessels

SPECIAL EQUIPMENT

- Standard hydrolastic mounts isolate 98% of hull vibration
- Welded steel base pan. Easy to mount and keep clean
- Belt guard protects operator even on sets in sound enclosures
- Sparkling white IMRON® polyurethane paint for protection and visibility
- Operator's and parts manuals

WORLD-CLASS OPTIONS

- Make your power generator system as unique as your boat. Northern Lights offers a comprehensive list of optional equipment including high power PTO's, super attenuated sound enclosures, customizable panels, and much more

CLASSIFICATION STANDARDS

- IMO Tier 2 and Tier 3 compliant
- Available certification from CCS upon request

LRQA CERTIFIED ISO 9001

Northern Lights, Inc. is ISO 9001 certified through Lloyds Register Quality Assurance

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