

Marine Generator Set

Engine Features

- Diesel powered
- Four cylinder
- Four cycle
- Closed cooling system
- Heat exchanger
- Lifting eyes
- Fuel lift pump

Generator Features

- Remote start connection availability
- Class F insulation
- Multivoltage adjustability
- 60/50 Hz capability
- Voltage regulation of $\pm 2\%$
- Frequency regulation of $\pm 5\%$
- Radio suppression

Optional Accessories

- Remote start and meter panel kit
- Seawater strainer
- Siphon break
- Sound shield

Generator Weights and Dimensions

	Without Sound Shield	With Sound Shield
Weight, kg (lbs.)		
wet	363 (800)	398 (880)
dry	356 (785)	391 (865)
Length, mm (in.)		
12 volt	1056 (41.57)	1137 (44.75)
24 volt	1069 (42.07)	1137 (44.75)
Width, mm (in.)	563 (22.17)	654 (25.75)
Height, mm (in.)	661 (26.03)	730 (28.75)

See the drawings on the last page for the detailed dimensions.

Generator Ratings

Model Series	Voltage	Hz	25°C (77°F)		Ph
			Amps	kW/kVA	
24EOZ	120/208	60	66.7	24/24	3
	120/240	60	57.8	24/24	3
	120/240	60	70.8	17/17	1
	127/220	60	63.1	24/24	3
	139/240	60	57.8	24/24	3
	220/380	60	36.5	24/24	3
20EFOZ	277/480	60	28.9	24/24	3
	110/190	50	60.8	20/20	3
	110/220	50	52.5	20/20	3
	110/220	50	65.9	14.5/14.5	1
	220/380	50	30.4	20/20	3
	230/400	50	28.9	20/20	3
	240/416	50	27.8	20/20	3

RATINGS: Marine continuous ratings per ISO 3046, ISO 8528-1, and Kohler ISO rating guideline 2.14. Obtain technical information bulletin (TIB-101) on ratings guidelines for complete ratings definitions.

Availability is subject to change without notice. Kohler Co. reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. Contact your local Kohler generator distributor for availability.

Application Data

Engine

Engine Specifications	60 Hz	50 Hz
Manufacturer	Yanmar	
Model	4TNE84-T	
Type	4 cycle, turbocharged	
Cylinder, number	4	
Displacement, L (cu. in.)	1.995 (121.74)	
Bore and stroke, mm (in.)	84 (3.31) x 90 (3.54)	
Compression ratio	18.0:1	
Combustion system	Direct injection	
Rated rpm	1800	1500
Max. power at rated rpm, hp	38.5	30.2
Cylinder block material	Cast iron	
Cylinder head material	Cast iron	
Piston rings	2 compression/1 oil	
Crankshaft material	Stamped forging	
Connecting rod material	Forged carbon steel	
Governor, type	Centrifugal, mechanical	

Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Battery, voltage	12 volt (standard) 24 volt (optional)	
Battery, charging	40-amp alternator	
Battery, recommendation (minimum)	500 CCA, 100 amp hr.	
Starter motor	1.8 kW Bendix, gear-reduction automotive type	

Cooling

Cooling System	60 Hz	50 Hz
Capacity, L (U.S. qts.) (approx.)	6.0 (6.3)	
Heat exchanger type	Yanmar, integral with water-cooled manifold	
Seawater pump type	Yanmar, belt driven	
Heat rejected to cooling water at rated kW, wet exhaust Btu/min.	1195	938
Engine water pump flow (gpm)	9.5	8.1
Seawater pump flow (gpm)	6	5

Fuel

Fuel System	60 Hz	50 Hz
Fuel shutoff solenoid	Electric	
Fuel pump	Electric, rotary vane	
Fuel pump priming	Electric	
Maximum recommended fuel lift, m (ft.)	1.2 (4)	

Lubrication

Lubricating System	60 Hz	50 Hz
Oil pan capacity with filter, L (U.S. qts.)	5.8 (6.1)	
Type	Pressure, trochoid pump	

Operation Requirements

Air Requirements	60 Hz	50 Hz
Engine combustion air requirements L/min. (cfm)	1982 (70)	1642 (58)
Engine/generator cooling requirements L/min. (cfm)	5946 (210)	4955 (175)

Fuel Consumption	60 Hz	50 Hz
Diesel, Lph (gph) at % load		
100%	7.3 (1.93)	5.6 (1.47)
75%	5.6 (1.49)	4.2 (1.10)
50%	4.1 (1.07)	3.1 (0.81)
25%	2.8 (0.73)	2.1 (0.56)

Note: The fuel consumption of the 60 Hz model is based on 24EOZ, and the fuel consumption of the 50 Hz model is based on 20EFOZ.

Engine Features

- One-side serviceability of fuel system, lubrication system, seawater pump, and air cleaner
- Low oil pressure cutout
- High water and high exhaust temperature cutouts
- Focused vibromounts
- Belt guard
- Disposable oil filter
- Oil drain valve and hose
- Water-cooled turbocharger
- Overspeed safety shutdown (optional)

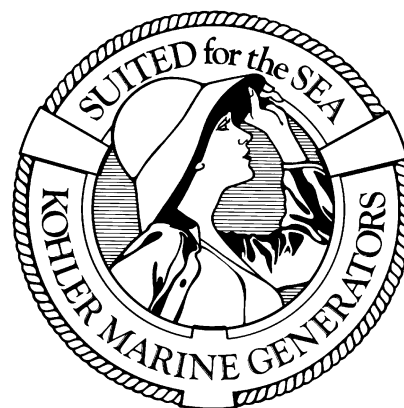
Controller Features

- Rubber-mounted to isolate vibration
- Safety shutdowns:
 - Engine overheat
 - Low oil pressure
 - Overspeed safety shutdown (optional)
- External 6-pin connector for remote panel harness
- Hourmeter for scheduling maintenance
- Start/stop switch
- Starter interlock to prevent reengagement of starter whenever engine is running
- Plug/receptacle controller connections
- Terminal connections:
 - Clearly identified
 - Corrosion resistant
 - Possibility of misconnection eliminated
- Quick disconnect equipped on 22-pin wiring harness
- Voltage/frequency adjustable PowerBoost™ voltage regulator

Application Data

Generator Features

- Brushless, rotating field design permits power to be obtained from stationary leads.
- Rotor and stator are vacuum impregnated and coated with high-bond epoxy varnish. Varnish helps prevent corrosion in high-humidity areas.
- Rotors are dynamically balanced to minimize vibration.
- Copper windings ensure minimal heat buildup. Insulation meets NEMA standards for class F insulation.
- Direct connected to the engine, the generator has sealed precision ball bearings with a precision-machined steel sleeve in the end bracket to prevent shaft misalignment and extend bearing life.
- The generator is mounted on a drip-proof tray.
- The generator is supplied with a twelve-lead reconnectable stator.



Accessories

Sound Shield

Provides for highly effective silencing, ease of access for engine/generator servicing, low maintenance, excellent durability, and safety.

Siphon Break

Mandatory kit on generators installed below the waterline. Prevents the siphoning of flotation water into the engine.

Line Circuit Breakers

Protect the generator from extreme overload.

Overspeed Shutdown Kit

Provides additional protection from overspeed damage.

Seawater Strainer

Equipped with a clear viewing jar allowing easy cleaning and maintenance of the strainer for a more efficient and longer-lived generator.

Ship-to-Shore Switch

Allows immediate switching to Kohler® generator set power or shore power protecting the electrical system from the possibility of simultaneous connection of both power sources. Available as a four-pole ship-to-shore switch.

Remote Start Panel

Allows starting/stopping from a location remote from the generator set. Supplied with a 101 mm (4 in.) connection harness. Overall mounting dimensions are 128 mm (5.04 in.) by 70 mm (2.76 in.) with a minimum mounting depth of 57 mm (2 1/4 in.).

Remote Start and Two-Meter Panel Kit

Allows starting/stopping from a location remote from the generator set. The illuminated gauges include an engine oil pressure gauge and a water temperature gauge. Overall dimensions are 152 mm (6 in.) by 152 mm (6 in.) with a minimum mounting depth of 70 mm (2 3/4 in.). Requires remote connection/extension harness and sender kit.

Remote Start and Four-Meter Panel Kit

Allows starting/stopping from a location remote from the generator set. The illuminated meters/gauges include a DC voltmeter, engine oil pressure gauge, water temperature gauge, and an hourmeter that records total generator set operating hours. Overall dimensions are 229 mm (9 in.) by 152 mm (6 in.) with a minimum mounting depth of 102 mm (4 in.). Requires remote connection/extension harness and sender kit.

Sender Kit

Provides senders necessary to make remote meter panel gauges functional.

Remote Connection/Extension Harness

Provides additional wiring between all remote panels and the controller connector. One required for each remote start and meter panel kit. Extension limited to a total of four kits and 23 m (75 ft.). Available in 4.6 m (15 ft.) and 7.6 m (25 ft.) lengths.

12-Inch Remote Wiring Harness

Equipped with a 6-pin connector on one end that is keyed to a controller box connector. Equipped on the other end with pigtails for connection to a customer-supplied start switch, generator ON light, hourmeter, etc.

Fuel Attachment Block

Allows connection to the fuel inlet and return from one point.

KOHLER POWER SYSTEMS

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