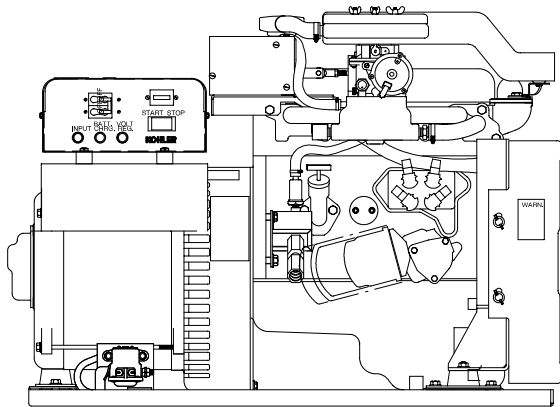


ISO 9001
KOHLER
 POWER SYSTEMS
 NATIONALLY REGISTERED



Marine Generator Set

Engine Features

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

Generator Features

- Remote connection availability
- Class F insulation
- 120-volt or 120/240-volt capability
- Voltage regulation of $\pm 2\%$
- Frequency regulation of $\pm 0.25\%$
- RFI suppression

Optional Accessories

- Ship-to-shore transfer switch
- Seawater strainer
- Siphon break

Generator Weights and Dimensions

Weight, kg (lbs.)	
Dry	227 (500)
Length, mm (in.)	913 (35.94)
Width, mm (in.)	509 (20.04)
Height, mm (in.)	620 (24.41)

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

Generator Ratings

Model Series	Voltage	Hz	25°C (77°F)	25°C (77°F)
			Amps	kW/kVA
12.5E	120	60	105	12.5/12.5
	120/240	60	52.5/52.5*	12.5/12.5

* Denotes amps per terminal.

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
Manufacturer	Ford
Model	VSG-413
Type	4 Cycle
Cylinders, number	4
Displacement, L (CID)	1.3 (79)
Bore and stroke, mm (in.)	73.91 (2.91) x 75.44 (2.97)
Compression ratio	9.5:1
Rated rpm	1800
Max. power at rated rpm, HP	23
Cylinder block material	Special high-grade cast iron
Cylinder head material	High-grade cast iron
Piston rings	2 compression/1 oil control
Crankshaft bearings, type	5-bearing precision-cast nodular iron
Valve material	
Intake	Forged steel w/chrome plated stem
Exhaust	Stem-silchrome #1 chrome finish head-21-4N w/tungsten cobalt
Connecting rod material	Forged steel
Governor, type	Electronic

Engine Electrical

Engine Electrical System	60 Hz
Ignition	Electronic, distributorless
Starter motor	Solenoid-actuated pinion
Spark plugs	Resistor-type RFI suppression
Battery voltage (DC)	12
Battery charging	10 amp
Battery recommendation (min.)	250 CCA @ -18°C (0°F)

Fuel

Fuel System	60 Hz
Type	Single venturi, downdraft carburetor
Choke	Automatic, electric
Fuel pump	Electric
Fuel pump, max. lift, m (ft.)	0.9 (3.0)

Fuel Consumption	60 Hz
Gasoline, Lph (gph) at % load	
100%	6.60 (1.75)
75%	5.50 (1.46)
50%	4.09 (1.08)
25%	2.80 (0.74)

Lubrication

Lubricating System	60 Hz
Type	Pressure, eccentric bi-rotor
Oil capacity with filter, L (qts.)	3.25 (3.50)

Cooling

Cooling System	60 Hz
L (qts.)	6.1 (6.4)
Heat exchanger type	2.5 in. dia. x 3 pass cupro-nickel
Seawater pump type	Belt driven, 10 blade impeller
Heat rejected to cooling water at rated kW, wet exhaust Btu/min.	610
Engine water pump flow, Lpm (gpm)	34.1 (9.0)
Seawater pump flow, Lpm (gpm)	23.1 (6.1)

Operation Requirements

Air Requirements	60 Hz
Engine combustion air requirements m ³ /min. (cfm)	0.9 (30.9)
Engine/Generator cooling requirements m ³ /min. (cfm)	19.3 (682)

Engine Features

- Meets Coast Guard safety standards for electrical systems and gasoline fuel systems (33CFR183)
- One-side serviceability of fuel system, lubrication system, seawater pump, and air intake silencer/backfire flame arrestor
- Low oil pressure cutout
- High water and high exhaust temperature cutouts
- Vibromounts
- Plastic belt guard
- Disposable oil filter
- Fuel filter
- Oil drain petcock with extension hose

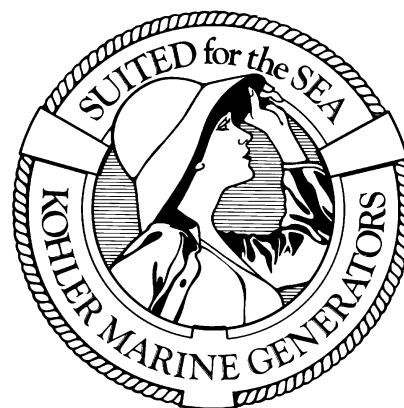
Controller Features

- Start/stop switch
- Rubber mounts to isolate vibration
- Safety shutdowns:
 - Overheat
 - Low oil pressure
 - Overspeed
- External 6-pin connector for remote panel harness
- Hourmeter for scheduling maintenance
- Voltage/frequency adjustable PowerBoost™ voltage regulator
- Starter interlock to prevent reengagement of starter whenever engine is running
- Plug/receptacle controller connections
- Terminal connections:
 - Clearly identified
 - Corrosion resistant
 - Eliminate the possibility of misconnection
- Quick disconnect 22-pin wiring harness

Application Data

Generator Features

- Static excited, 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.
- Directly connected to the engine, the generator has sealed precision ball bearings with a precision-machined steel sleeve in the end bracket (or end bearing tolerance ring) to prevent shaft misalignment and extend bearing life.
- Circuit breakers, 50 amp rated, protect the generator from extreme overload.
- The generator is mounted on a drip-proof tray.
- The generator is equipped with a four-lead reconnectable stator.



Accessories

Siphon Break

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

Seawater Strainer

The seawater strainer with the clear viewing jar allows easy cleaning and maintenance of the strainer for a more efficient and longer-living generator.

Ship-to-Shore Switch

The Kohler ship-to-shore transfer switch allows immediate switching to the Kohler® generator set power or shore power, protecting the electrical system from the possibility of simultaneous connection to both power sources.

High-Lift Fuel Pump Kit

Provides additional fuel lift capabilities and improves operation in high-temperature applications.

Remote Start Panel

Allows starting/stopping from a location remote from the generator set. Supplied with a 4.6 m (15 ft.) connection harness. The overall mounting dimensions are 103 mm (4 1/16 in.) by 54 mm (2 1/8 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 water temperature gauge. The 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 (PA-249334 or PA-249336 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 (PA-249334 or PA-249336 and Sender Kit).

Sender Kit

Provides gauge senders for the remote start and two-meter panel kit and the remote start and four-meter panel kit. The gauge sender kit is required to make the oil pressure and water temperature 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.).

12-Inch Remote Wiring Harness

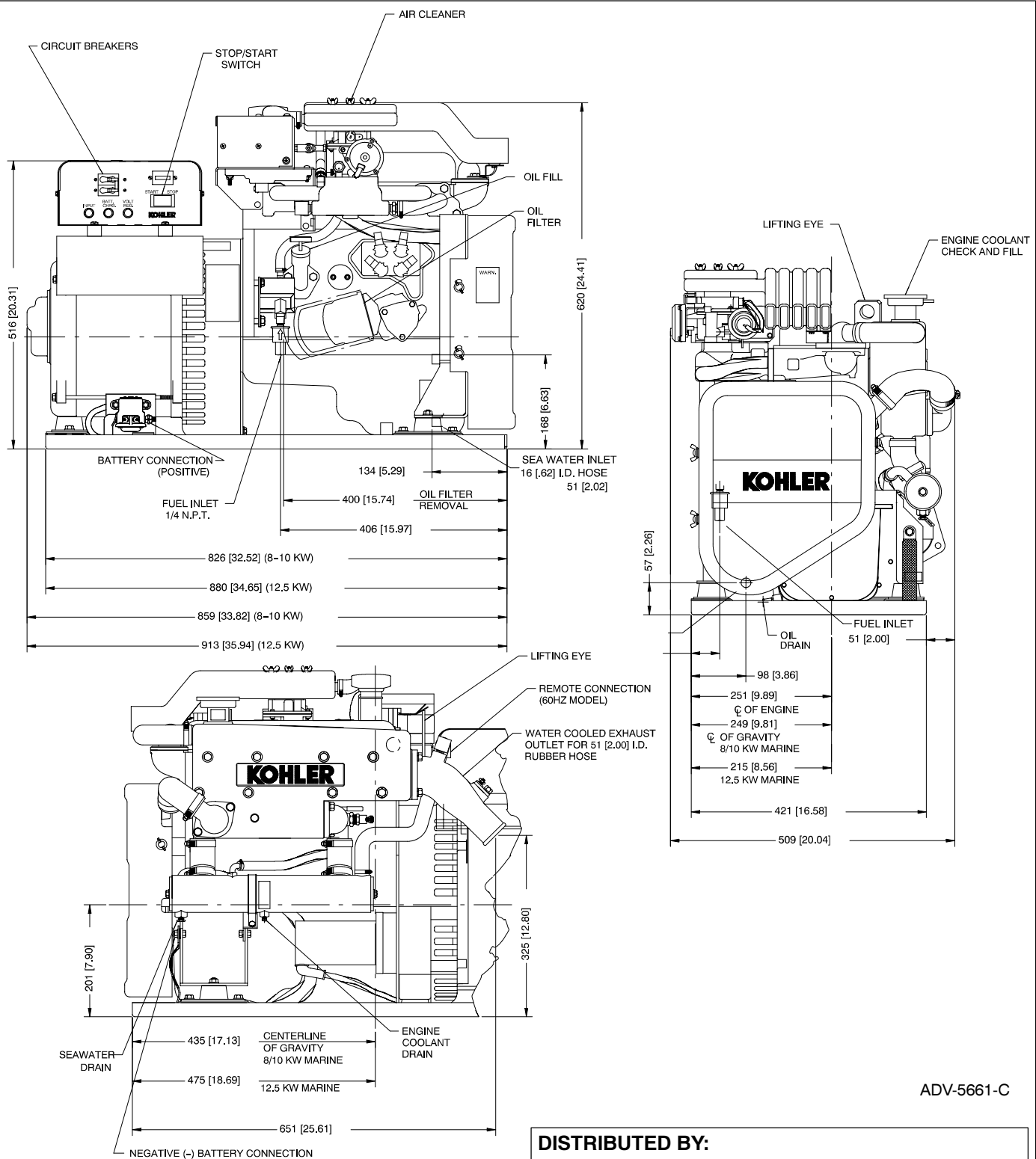
This 0.3 m (1 ft.) wiring harness has a 6-pin connector on one end which is keyed to the controller box connector. The other end has pigtails for connection to a customer-supplied start switch, generator ON light, hourmeter, etc.

Sea Spares™ Maintenance Kit

Kohler's Sea Spares Kit consists of a durable white utility box filled with necessary marine parts.

KOHLER POWER SYSTEMS

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NOTE: Dimensions in brackets are inch equivalents.

NOTE: This drawing is provided for reference only and is not intended for installation planning. Contact your local distributor for more detailed information.

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