



e-QD MARINE GENERATORS



55.0* kW e-QD 60 Hz e-Series™ Networked Model MDDCB Diesel

*Unlimited running time at rated power; additional 10% reserve power available

Leading the Way

- Rugged dependability, high quality, and innovation make Onan the leader in marine generator set design and development.
- The digital e-QD (electronic Quiet Diesel) Series models are the first marine gensets with self-monitoring capability and network communication.
- The standard e-Series Digital Display provides user-friendly diagnostics including extensive engine and alternator information, self-diagnostic features, and text display.
- Onan's advanced design and development process uses technology to lower sound and vibration. Our sound shields minimize noise and deliver better sound quality. The optimized mounting system greatly reduces vibration.
- Onan marine gensets are certified to U.S. Environmental Protection Agency (EPA) Tier II emission standards.
- Onan has the largest worldwide certified Distributor/Dealer support network in the industry with more than 60 years of marine experience.

Genset Ratings

Model	kW/kVA	Voltage	Amps	Phase	Hz	Engine RPM
55MDDCB	55.0/55.0	120/240	458.3/229.2	1	60 Hz	1800
55MDDCB	55.0/68.75	120/208	190.8	3	60 Hz	1800
		127/220	180.4			
		120/240	165.4			
		139/240	165.4			
		240/416	95.4			
		255/440	90.2			
		277/480	82.7			

Three phase output at 0.8 power factor. Rating conditions are 100 kPa (29.6 in Hg) barometric pressure, 30% relative humidity and 25° C (77° F) (ref. ISO 3046).

Genset Dimensions and Weights

	Without Sound Shield	With Sound Shield
Length	70.0 in (1779 mm)	70.2 in (1783 mm)
Width	32.4 in (822 mm)	33.1 in (840 mm)
Height	39.1 in (994 mm)	40.9 in (1039 mm)
Weight (dry)	2352 lb (1067 kg)	2572 lb (1167 kg)

Features

- Advanced digital electronic control providing extensive diagnostic capability
- SAE J-1939 CAN data link for monitoring generator set status and diagnostics for engine and alternator
- e-Series Digital Display - graphical LCD display for genset operating parameters, diagnostics, and pre-alarm indication in text format
- Shutdown with diagnostic indicator light for
 - High engine coolant temperature
 - Low oil pressure
 - Over speed
 - Over voltage
 - Starter overcrank
 - Additional customer input, and many more
- Electronic governor allows the genset to maintain isochronous frequency control and close voltage regulation to provide quality power for digital appliances and computers
- Three phase alternator, 90° C rise at 50° C ambient, brushless, 12 lead reconnectable
- Digital voltage regulator integral with control
- 12 V DC electric system with battery charging, negative ground
- Mechanical fuel transfer pump with manual priming lever
- Engine starter with automatic start disconnect
- Water cooled exhaust manifold and turbocharger
- Freshwater cooling system with keel cooling connections
- Coolant overflow bottle to easily maintain coolant level
- Dry exhaust elbow with flange connection
- Common fault relay for external alarm
- Combustion air filter with washable element
- Full flow lube oil filter
- Oil drain valve
- Fuel filter/water separator, primary and secondary
- Drip pan
- Bulk head type fuel line connections for ease of installation
- Captive focalized mounting system with vibration isolator mounts
- Single point lifting bracket for ease of installation
- Plug-in watertight connector for optional remote panel
- Closed crankcase ventilation system with filter to eliminate engine room contamination
- Factory load tested
- E-coat process to protect sheet metal
- Five year Limited Warranty

Available Options

- Low and high oil level indicator and shutdown
- Heat exchanger cooling with gear-driven raw water pump with loss of raw water flow protection
- 12V DC electric system with battery charging, isolated DC
- 24 V DC electric system with battery charging, negative ground
- 24 V DC electric system with battery charging, isolated DC
- Single phase alternator, 90° C rise at 50° C ambient, 4 lead
- Set-mounted mainline circuit breaker; shunt trip and auxiliary contacts available
- Water cooled exhaust mixing elbow with high temperature shutdown
- Dry exhaust elbow with 8 bolt flange per ASME B16.5
- Electric fuel transfer pump for increased fuel lift capability
- Front power take off - 12 V or 24 V - 70 or 100 hp clutch with torsional coupling and configured for a "C" splined 1-1/4 in pump shaft (SAE J744)
- Coolant heater, 120 V or 240 V, 1000 W
- Anti-condensation resistance heater, 120 V or 240 V, 100 W
- Permanent Magnet Generator (PMG) exciter and analog voltage regulator for paralleling operation
- Manual voltage regulator
- Droop compensator for parallel operation
- Commercial Limited Warranty packages
- Export box packing
- Sound shield housing with fire extinguisher access port



Onan Optional Sound Shield

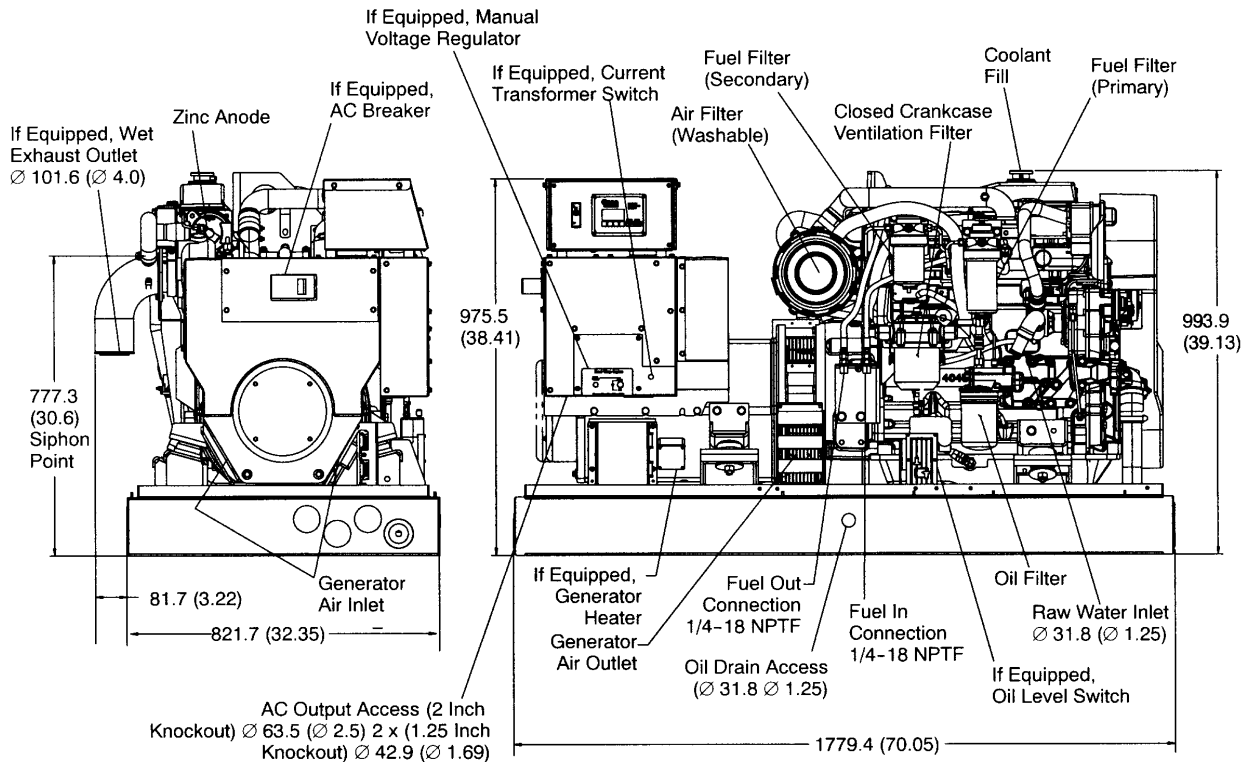
Accessories

- e-Series Digital Display - graphical LCD remote display for genset operating parameters, diagnostics, and pre-alarm indication in text format
- Basic remote panel with start/stop switch with run (green) and control status (amber) lamps
- Remote start/stop switch with dual lamps and mating harness for panel installation
- Panel with start/stop switch with run (green) and control status (amber) lamps; replaces e-Series Digital Display if mounted remotely
- Pigtail harness for genset remote connectors and remote panels
- Remote panel wire harness - 15 ft, 25 ft, 45 ft, 75 ft, 100 ft or 150 ft
- Y adapter harness for dual remote stations
- Set-mounted mainline circuit breaker; shunt trip and auxiliary contacts available
- Siphon break kit
- Wet exhaust hose
- Marine muffler and water separator
- Battery
- Coolant heater, 120 V or 240 V, 1000 W
- Anti-condensation resistance heater, 120 V or 240 V, 100W
- Low and high oil level indicator and shutdown
- Manual voltage regulator
- Keel cooling expansion tank, set-mountable
- Secondary vibration isolator system
- Front power take off - 12 V or 24 V - 70 or 100 hp clutch with torsional coupling and configured for a "C" splined 1-1/4 in pump shaft (SAE J744)
- Sound shield housing with fire extinguisher access port
- Electric fuel transfer pump for increased fuel lift capability



e-Series Digital Display

Outline Drawing



This outline drawing is provided for general reference only and is not intended for design or installation. See installation manual and obtain outline drawing number 500-3799 for more information (available from your Distributor/Dealer).

Engine Detail

Design 4-cycle, water-cooled diesel
Cylinders 4 Turbocharged
Bore 4.2 in (106.5 mm)
Stroke 5.00 in (127 mm)
Displacement 275 in³ (4.5 L)
Compression Ratio 17.6:1
Max Fuel Lift 10 ft (3 m)
Lube Oil Capacity 13.3 qt (12.6 L)
Coolant Flow Rate 25 Gal/min (94 L/min)

Raw Water Flow Rate 22 Gal/min (84 L/min)
Starting System Remote 3-wire, 12 V starting battery required, 640 CCA; 24 V optional
Power (Max) SAEJ1349 at 1800 RPM 107 hp (80 kW)
Fuel Injection Pump Stanadyne DE-10
Combustion Chamber Direct injection

Max Raw Water Lift 10 ft (3 m)
Fuel Consumption
 No. 2 diesel fuel, Gal/hr (L/hr)

1/4 Load	1.4 (5.5)
1/2 Load	2.4 (9.3)
3/4 Load	3.4 (13.0)
Full Load	4.4 (16.8)

Alternator Detail

Design Onan brushless, revolving field, 4-pole alternator; rigidly coupled to engine and permanently aligned
Voltage Regulator Solid state, circuit board encapsulated for corrosion protection

Exciter System Brushless with 8-pole stator mounted in endbell; rotating rectifier assemblies are encapsulated for protection from adverse environments
Stator Skewed stator and 2/3 pitch windings minimize field heating and voltage harmonics; resin-coated for corrosion protection

Rotor Dynamically balanced assembly; direct-coupled to engine by flexible drive discs; supported by prelubricated, maintenance-free ball bearing
Cooling Direct drive centrifugal blower
Insulation System Class H per NEMA MG1-1.65 and BS 5000

Genset Detail

Operating Environment Gensets are durability tested at maximum ambient air temperature: 122° F (50° C); raw water temperature: 100° F (37.8° C)

Frequency Regulation Isochronous
Steady-State Frequency Band is less than 0.5% per ISO 8528-5

Steady-State Voltage Deviation is less than +/-1% per ISO 8528-5
Sound Level
 72 dB(A)*
 * Full load at 1 m, with optional Onan sound shield

Warranty Policy

The Onan express, written Limited Warranty covers virtually everything except routine maintenance for the first two years you own your marine genset, and covers parts and labor on major power train and generator set parts during the third through fifth years.

For complete Onan Limited Warranty details see your Onan Distributor/Dealer.

After Sale Support

GENUINE ONAN MAINTENANCE PARTS AND PRODUCTS - For your ongoing satisfaction and the dependability of your Onan marine genset, Onan offers a complete line of replacement and tune-up parts, accessories and oil and maintenance chemicals. Onan marine parts are packaged for correct selection and convenient on-board storage.

EASY TO LOCATE CERTIFIED ONAN SERVICE AND PARTS DEALERS - Onan has the largest and best-trained worldwide certified Distributor/Dealer network in the industry, offering on-time parts and service and installation assistance. Onan Distributor/Dealers stock and sell commonly used Onan marine genset maintenance parts, accessories and products, plus operator manuals and literature on current Onan gensets. They can help you select and install the right genset for a new vessel or accessories on older models, or provide answers to questions on proper operation and maintenance procedures.

MANUALS - Installation, operators and parts manuals are shipped with the genset. To obtain additional copies or other manuals for this model, see your Onan Distributor/Dealer.

Standards and Testing



National Marine Manufacturers Association (NMMA) members produce every conceivable product used by recreational boaters. NMMA provides a wide variety of programs and services including technical expertise, standards monitoring, government relations advocacy and industry statistics.

The American Boat and Yacht Council (ABYC) develops standards and recommended practices for designing, constructing, equipping and maintaining small pleasure and commercial craft.

This generator set was designed and manufactured in facilities certified to ISO 9001.

Contact your Distributor/Dealer for more information



www.onan.com

Cummins Power Generation
1400 73rd Avenue N.E.
Minneapolis, MN 55432 U.S.A
1-800-888-ONAN or 763-574-5000
fax: 763-528-7242
email: feedback@onan.com

Onan is a brand of Cummins Power Generation, which is a subsidiary of Cummins Inc. Onan, Cummins Power Generation, E-Series, E-QD, E-QG and "Leading the Way" are servicemarks, trademarks, and/or registered trademarks of Cummins Inc.

WARNING: Backfeed to a utility system can cause electrocution and/or property damage. Do not connect to building electrical except through approved device or after building main breaker is open.