



Standard Features

Generator Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz Model REOD generator set is UL 2200 listed.
- The 60 Hz generator set engine is certified by the Environmental Protection Agency (EPA) to conform to Tier 2 nonroad emissions regulations.
- A one-year limited warranty covers all systems and components. Two- and five-year extended warranties are also available.
- Four-point mounting with vibration isolators
- Static-excited (REOD) or brushless (REOZD) alternator
- Voltage regulation of $\pm 1.5\%$
- Outstanding motor-starting capability
- Sustained short-circuit capability
- Remote start 12-pin connector

ADC 2100 Advanced Digital Control Features

- Designed for today's most sophisticated electronics
- Easy to read alpha-numeric display
- Compact, integrally mounted control
- Potted boards/sealed connectors for maximum corrosion protection
- Remote monitoring of fault conditions
- Membrane keypad for configuration and adjustment
- Programmed crank cycle

Optional Enclosure Features

- Enclosures reduce sound levels and protect the generator set from the elements, animal intrusion, and unwanted entry
- Fade-, scratch-, and corrosion-resistant Kohler cream beige finish with lockable, flush-mounted door latches
- Weather enclosures and 68 dBA sound enclosures available
- Acoustic insulation meets UL 94 HF1 flammability classification

Generator Ratings

| Model | Voltage | Hz | Ph | 130 °C Rise Standby Rating | | 105 °C Rise Prime Rating | |
|-------------------------------------|---------|----|----------|----------------------------|---------|--------------------------|------|
| | | | | kW/kVA | Amps | kW/kVA | Amps |
| 10REOD (4 lead 4H4) | 120/240 | 60 | 1 | 10.0/10.0 | 41.7 | 9.0/9.0 | 37.5 |
| | 110/220 | 50 | 1 | 9.0/9.0 | 40.9 | 8.1/8.1 | 36.8 |
| 10REOD/ 10REOZD (12 lead 4J4) | 120/208 | 60 | 3 | 10.0/12.5 | 34.7 | 9.0/11.3 | 31.2 |
| | 120/240 | 60 | 1 | 10.0/10.0 | 41.7 | 9.0/9.0 | 37.5 |
| | 120/240 | 60 | 3 | 10.0/12.5 | 30.1 | 9.0/11.3 | 27.1 |
| | 127/220 | 60 | 3 | 10.0/12.5 | 32.8 | 9.0/11.3 | 29.5 |
| | 139/240 | 60 | 3 | 10.0/12.5 | 30.1 | 9.0/11.3 | 27.1 |
| | 220/380 | 60 | 3 | 9.5/11.9 | 18.0 | 8.6/10.7 | 16.2 |
| | 277/480 | 60 | 3 | 10.0/12.5 | 15.0 | 9.0/11.3 | 13.5 |
| | 110/190 | 50 | 3 | 8.5/10.6 | 32.3 | 7.7/9.6 | 29.1 |
| | 110/220 | 50 | 1 | 7.5/7.5 | 34.1 | 6.8/6.8 | 30.7 |
| | 110/220 | 50 | 3 | 8.5/10.6 | 27.9 | 7.7/9.6 | 25.1 |
| 220/380 | 50 | 3 | 8.5/10.6 | 16.1 | 7.7/9.6 | 14.5 | |
| 230/400 | 50 | 3 | 8.5/10.6 | 15.3 | 7.7/9.6 | 13.8 | |
| 240/416 | 50 | 3 | 8.5/10.6 | 14.7 | 7.7/9.6 | 13.3 | |

RATINGS: All three-phase units are rated at 0.8 power factor. **Standby Ratings:** Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. **Prime Power Ratings:** Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. For limited running time and base load ratings, consult the factory. Obtain the technical information bulletin (TIB-101) on ratings guidelines for the complete ratings definitions. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. Contact your local Kohler® generator set distributor for availability. **GENERAL GUIDELINES FOR DERATING:** **ALTITUDE:** Derate 1.0% per 100 m (328 ft.) elevation above 200 m (656 ft.). **TEMPERATURE:** Derate 2.0% per 10°C (18°F) temperature above 25°C (77°F).

Application Data

Engine

| Engine Specifications | 60 Hz | 50 Hz |
|---------------------------|-----------------------|-------|
| Manufacturer | Yanmar | |
| Engine model | 3TNV82A | |
| Engine type | 4 cycle | |
| Cylinder arrangement | 3, inline | |
| Bore and stroke, mm (in.) | 82 (3.23) x 84 (3.31) | |
| Displacement, L (cu. in.) | 1.330 (81.14) | |
| Compression ratio | 19.2:1 | |
| Combustion system | Direct injection | |
| Main bearings | Replaceable sleeve | |
| Rated rpm | 1800 | 1500 |
| Rated HP: | | |
| Continuous | 16.9 | 13.8 |
| Maximum, 1 hr. | 18.5 | 15.2 |
| Cylinder block material | Cast iron | |
| Cylinder head material | Cast iron | |
| Crankshaft | Horizontal | |
| Connecting rod material | Forged carbon steel | |
| Governor, type | Mechanical | |
| Frequency regulation | | |
| No-load to full-load | ±2.5% | |
| Steady state | ±0.5 Hz | |

Engine Electrical

| Engine Electrical System | 60 Hz | 50 Hz |
|--|--|-------|
| Ignition | | |
| Battery voltage | 12 | |
| Battery recommendation, min. CCA for 0°C (-18°F) | 650 cold cranking amps, 100 amp/hr. | |
| Starter motor | 12 VDC, 1.8 kW Bendix, gear-reduction automotive type | |
| Battery-charging alternator | 12 VDC, 40 Amps | |

Cooling

| Cooling System | 60 Hz | 50 Hz |
|--|------------|-------|
| Type | Liquid | |
| Capacity, engine only, L (qt.) | 1.8 (1.9) | |
| Capacity with unit-mounted radiator, L (qt.) | 4.1 (4.3) | |
| Fan diameter, unit-mounted radiator, mm (in.) | 409 (16.1) | |
| Heat rejected to cooling water at rated kW, Btu/min. | 574 | 539 |
| Optional remote radiator setup: | | |
| Water inlet, mm (in.) | 28 (1.1) | |
| Water outlet, mm (in.) | 28 (1.1) | |

Fuel

| Fuel System | 60 Hz | 50 Hz |
|----------------------------|-------------------------------|-------|
| Fuel pump | Electric | |
| Maximum lift, m (in.) | 1 (39) | |
| Fuel type | Diesel fuel ASTM D975 No. 2-D | |
| Fuel supply line | 1/4 NPT | |
| Fuel return line, mm (in.) | 8 (5/16) | |

Lubrication

| Lubricating System | 60 Hz | 50 Hz |
|---------------------------------------|----------------------|-------|
| Type | Pressure | |
| Oil pan capacity with filter, L (qt.) | 3.6 (3.8) | |
| Oil filter | Full flow, cartridge | |

Operation Requirements

| Air Requirements | 60 Hz | 50 Hz |
|---|-----------|-----------|
| Combustion air, m ³ /min. (cfm) | 1.1 (38) | 0.9 (32) |
| Alternator min. cooling air, m ³ /min. (cfm) | 4.8 (170) | 4.0 (140) |
| Radiator min. cooling air, m ³ /min. (cfm) | 39 (1400) | 31 (1100) |
| Exhaust flow, m ³ /min. (cfm) | 2.9 (104) | 2.1 (75) |

| Fuel Consumption | 60 Hz | 50 Hz |
|------------------------------|-----------|-----------|
| Diesel, Lph (gph), at % load | | |
| 100% | 4.0 (1.1) | 3.2 (0.8) |
| 75% | 2.7 (0.7) | 1.8 (0.5) |
| 50% | 2.0 (0.5) | 1.7 (0.5) |
| 25% | 1.3 (0.4) | 1.1 (0.3) |

Engine Features

- One-side serviceability—air filter, fuel filter, lube oil filter, oil fill, oil drain, oil check
- Special alloys minimize noise and vibration
- Battery charging alternator
- Heavy-duty, dry-type air cleaner
- Low oil pressure shutdown
- High engine temperature shutdown
- Belt guard
- Disposable oil filter
- Oil drain valve and hose
- Heavy-duty construction
- Certified by the Environmental Protection Agency (EPA) to conform to Tier 2 emissions regulations
- Water-cooled design
- Diesel fueled
- Three cylinders
- Four cycle
- Frequency regulation of ±2.5%
- Electric fuel lift pump

Alternator

Alternator Specifications

| Specifications | 4H4 (1-phase) | 4J4 (3-phase) |
|--|------------------------------|------------------|
| Manufacturer | Kohler | |
| Type | Rotating field | |
| Exciter type: | | |
| REOD | Static Excited | |
| REOZD | Brushless | |
| Leads: quantity | 4 | 12 |
| Voltage regulator | Solid State | |
| Insulation: | | |
| Material | Class H | |
| Temperature rise* | 130°C | |
| Bearing: quantity, type | 1 | |
| Coupling | Flexible disc | |
| Amortisseur windings | Full | |
| Voltage regulation, no-load to full-load | ±1.5% maximum | |
| One-step load acceptance | 100% of Rating | |
| Peak motor starting kVA: | (35% dip for voltages below) | |
| 60 Hz | 21 | 26.2 |
| 50Hz | 20 | 20.6 |

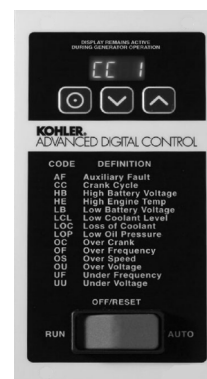
* In 25°C ambient

Alternator Features

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Self-ventilated and dripproof construction.
- Windings vacuum impregnated with fungus-resistant epoxy varnish per MIL-I-24092.
- Class H insulation
- Rotors are dynamically balanced to minimize vibration.
- Copper windings ensure minimal heat buildup. Insulation meets NEMA standards for class H insulation.
- Generator direct connected to the engine.
- Sealed precision ball bearings with a precision-machined steel sleeve in the end bracket prevent shaft misalignment and extend bearing life.
- Skewed rotor provides smooth voltage waveform.

ADC 2100 Control Features

- **LED display:**
 - Runtime hours
 - Crank cycle status
 - Diagnostics/fault codes/data
- **Keypad:**
 - Secure access, password protected
 - Voltage, gain, and speed adjustment
 - Controller configuration (system voltage, number of phases, battery voltage, and generator set model)
- **Master control switch: run/off-reset/auto (engine start)**
- **Remote two-wire start/stop capability**
- **Potted electronics and sealed connections**
- **Voltage regulation ± 1.5%**
- **Cyclic cranking: 15 seconds on, 15 seconds off (3 cycles)**
- **Faults with shutdown:**
 - High engine temperature
 - Low oil pressure
 - Overcrank safety
 - Overspeed
 - Over/under voltage
 - Over/under frequency
 - Auxiliary fault
- **Faults with warning:**
 - Low battery voltage
 - High battery voltage
- **Power requirements:**
 - 12 VDC with fuse protection
 - 200 mA @ 12 VDC



Generator Set Weights and Dimensions

| | Weight wet, no fuel, kg (lbs.) | Weight wet, with fuel, kg (lbs.) | Length mm (in.) | Width mm (in.) | Height mm (in.) |
|--|--------------------------------------|--|--------------------|-------------------|--------------------|
| Generator Set: | | | | | |
| With Remote Radiator Setup | N/A | — | 856 (33.7) | 668 (26.3) | 606 (23.9) |
| With Inline Radiator | 259 (570) | — | 1110 (43.7) | 691 (27.2) | 742 (29.2) |
| With Radiator and Subbase Tank: | | | | | |
| 40 Gallon | 472 (1040) | 586 (1290) | 1730 (68.1) | 860 (33.9) | 781 (30.7) |
| 80 Gallon | 526 (1160) | 753 (1660) | 1730 (68.1) | 860 (33.9) | 956 (37.6) |
| With Radiator, Tank, and Enclosure: | | | | | |
| 40 Gallon | 606 (1335) | 719 (1585) | 1782 (70.2) | 912 (35.9) | 1075 (42.3) |
| 80 Gallon | 660 (1455) | 887 (1955) | 1782 (70.2) | 912 (35.9) | 1075 (42.3) |

Accessories

Cooling Systems

- Block Heater
(recommended for ambient temperatures below 0°C [32°F])
- Radiator Duct Flange (not for enclosed units)
- Remote Radiator Setup
- Unit-Mounted Radiator w/Pusher Fan (included with enclosures)

Electrical System

- Battery
- Battery Charger
- Battery Heater
(recommended for ambient temperatures below 0°C [32°F])
- Battery Rack (for drip tray)
- Common Fault and Run Relays
- Line Circuit Breaker
- Preheat Kit
- Remote Digital Gauge (requires oil pressure sender and remote harness)
- Remote Harness, 7.6 m (25 ft.)
- Remote Harness, 4.6 m (15 ft.)

Enclosures (silencer included)

- Rodent Guards
- Sound Enclosure, 68 dBA @ 7 m (23 ft.)
- Weather Enclosure

Engine

- Auxiliary Fuel Pump
- Flexible Fuel Lines
- Oil Pressure Sender
- Silencer (included on enclosed units)

Fuel Tanks and Accessories

- 40 Gallon Subbase Tank and Mounting
- 80 Gallon Subbase Tank and Mounting
- Inner Tank Leak Alarm
- Low Fuel Alarm

Maintenance and Literature

- General Maintenance Literature Kit
- Overhaul Literature Kit
- Production Literature Kit

Warranty

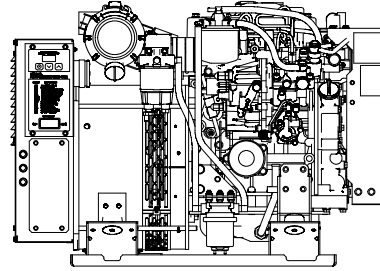
- Two-Year Extended Warranty
- Five-Year Extended Warranty

Miscellaneous Accessories

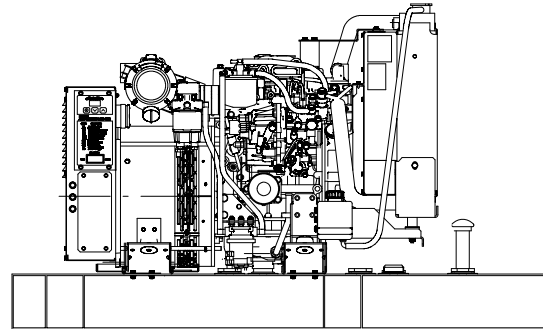
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Standard Equipment

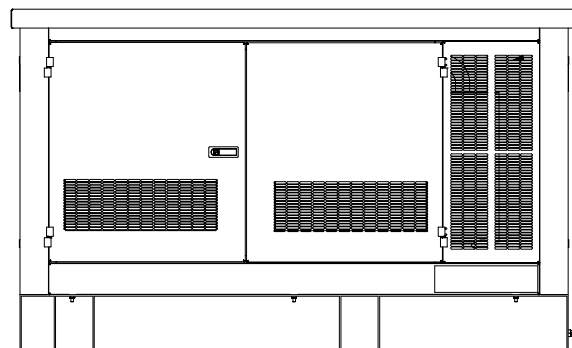
- ADC 2100 Controller
- Drip Tray (included on units without subbase tanks)
- Fuel/Water Separator
- Oil Drain Extension
- Remote Harness Pigtail, 305 mm (12 in.)



Generator Set with
Remote Radiator Setup and Drip Tray



Generator Set with Unit-Mounted Radiator
and Subbase Tank



Optional Enclosure and Subbase Tank

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