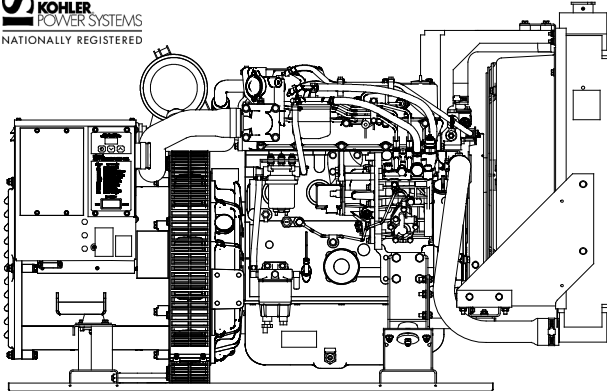


**ISO 9001**  
KOHLER  
POWER SYSTEMS  
NATIONALLY REGISTERED



## Mobile/Commercial Generator Set

### Engine Features

- Heavy-duty construction
- Certified by the Environmental Protection Agency (EPA) to conform to Tier 4 Interim emissions regulations
- Water-cooled design
- Diesel fueled
- Four cylinders
- Four cycle
- Frequency regulation of  $\pm 0.5\%$
- Electric fuel lift pump
- Lifting eye

### Generator Features

- CSA certified, file #LR 955
- Remote start 12-pin connector
- Class H insulation
- Voltage regulation of  $\pm 1.5\%$
- Radio suppression
- Outstanding motor-starting capability
- Sustained short-circuit capability
- Four-point mounting with vibration isolators
- Prototype-tested, factory-built, and production-tested design

## Generator Weights and Dimensions

	Remote Radiator	Inline Radiator
Weight—dry, kg (lbs.)	490 (1080)	526 (1160)
Length, mm (in.)	1184 (46.6)	1434 (56.5)
Width, mm (in.)	610 (24.0)	650 (25.6)
Height, mm (in.)	818 (32.2)	922 (36.3)

See the drawings on the last page for detailed dimensions.

## Generator Ratings

Model Series	Voltage	Hz	25°C (77°F) Amps	25°C (77°F) kW/kVA	Ph
30EORZDB	120/208	60	104.1	30/37.5	3
	120/240	60	125.0	30/30	1
	120/240	60	90.2	30/37.5	3
	127/220	60	98.4	30/37.5	3
	139/240	60	90.2	30/37.5	3
	220/380	60	57.0	30/37.5	3
25EFORZDB	277/480	60	45.1	30/37.5	3
	110/190	50	95.0	25/31.3	3
	110/220	50	113.6	25/25	1
	115/230	50	108.7	25/25	1
	220	50	113.6	25/25	1
	240	50	104.2	25/25	1
	110/220	50	82.0	25/31.3	3
	220/380	50	47.5	25/31.3	3
	230/400	50	45.1	25/31.3	3
	240/416	50	43.4	25/31.3	3

RATINGS: All single-phase units are rated at 1.0 power factor. All three-phase units are rated at 0.8 power factor. Mobile continuous ratings per ISO 3046 and ISO 8528-1. Obtain technical information bulletin (TIB-101) on ratings guidelines for complete ratings definitions. 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).

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 set distributor for availability.

### 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
- SAE J1939 CANbus output
- Remote monitoring of up to 13 fault conditions
- Membrane keypad for configuration and adjustment
- Programmed crank cycle

# Application Data

## Engine

Engine Specifications	60 Hz	50 Hz
Manufacturer	Yanmar	
Model	4TNV98	
Type	4 cycle, naturally aspirated	
Cylinder arrangement	4, inline	
Bore and stroke, mm (in.)	98 (3.86) x 110 (4.33)	
Displacement, L (cu. in.)	3.319 (202.5)	
Compression ratio	18.5:1	
Combustion system	Direct injection	
Main bearings	Replaceable sleeve	
Rated rpm	1800	1500
Rated HP, continuous	49.9	41.8
Cylinder block material	Cast iron	
Cylinder head material	Cast iron	
Crankshaft	Horizontal	
Connecting rod material	Forged carbon steel	
Governor, type	Isochronous electronic	
Injection pump	Yanmar YPES	
Frequency regulation		
No-load to full-load .....	±0.5%	
Steady state .....	±0.33%	

## Lubrication

Lubricating System	60 Hz	50 Hz
Type	Pressure	
Oil pan capacity with filter, L (qt.)	10.2 (10.8)	
Oil filter	Full flow, cartridge	

## Operation Requirements

Air Requirements	60 Hz	50 Hz
Engine combustion air requirements, m <sup>3</sup> /min. (cfm)	2.7 (95)	2.2 (79)
Alternator min. cooling air requirements, m <sup>3</sup> /min. (cfm)	15.6 (550)	13.0 (460)
Radiator min. cooling air requirements, m <sup>3</sup> /min. (cfm)	87.8 (3100)	82.1 (2900)
Exhaust flow requirements, m <sup>3</sup> /min. (cfm)	9.6 (339)	7.7 (272)

Fuel Consumption	60 Hz	50 Hz
Diesel, Lph (gph), at % load		
100%	9.9 (2.69)	7.8 (2.05)
75%	7.5 (1.99)	5.9 (1.56)
50%	5.5 (1.46)	4.2 (1.10)
25%	3.6 (0.96)	2.8 (0.74)

## Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Ignition		
Battery voltage .....	12	
Battery recommendation, min. ....	800 cold cranking amps, 100 amp/hr.	
Starter motor .....	2.3 kW	

## Engine Features

- One-side serviceability—air filter, fuel filter, lube oil filter, oil fill, oil drain, oil check
- Special alloys minimize noise and vibration
- Air intake heater, cold starting aid (option)
- Battery charging alternator (70 amp)
- Lifting eye
- Heavy-duty, dry-type air cleaner
- Low oil pressure shutdown
- High engine temperature shutdown
- Belt guard
- Disposable oil filter
- Oil drain valve and hose

## Cooling

Cooling System	60 Hz	50 Hz
Type	Liquid	
Capacity, engine only, L (qt.)	4.2 (4.4)	
Capacity with unit-mounted radiator, L (qt.)	15 (16)	
Heat rejected to cooling water at rated kW, Btu/min.	1640	1370

## Generator Features

- 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 H 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.

## 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	

# Application Data

## 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, phase, and frequency settings, 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  $\pm 1.5\%$
- Cyclic cranking: 15 seconds on, 15 seconds off (3 cycles)
- Faults with shutdown:
  - High engine temperature
  - Low oil pressure
  - Loss of coolant
  - 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 Features

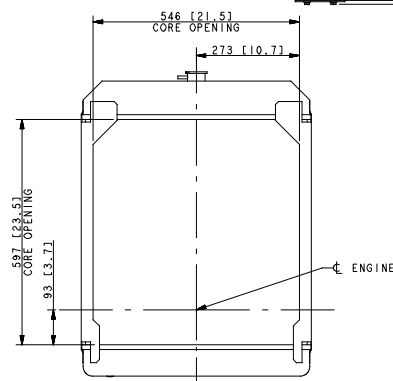
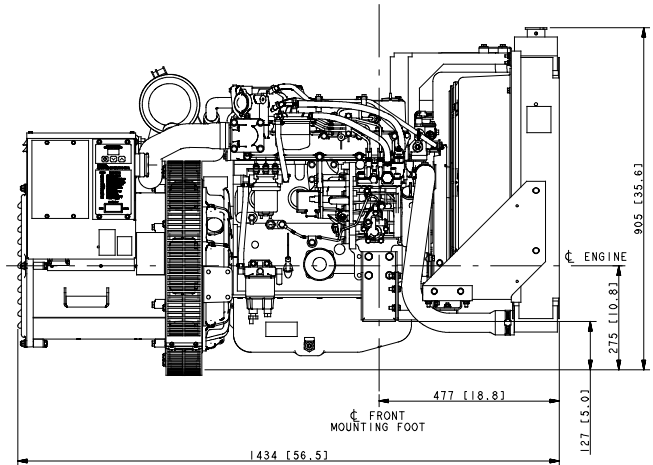
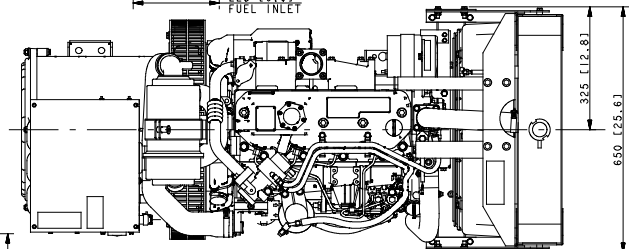
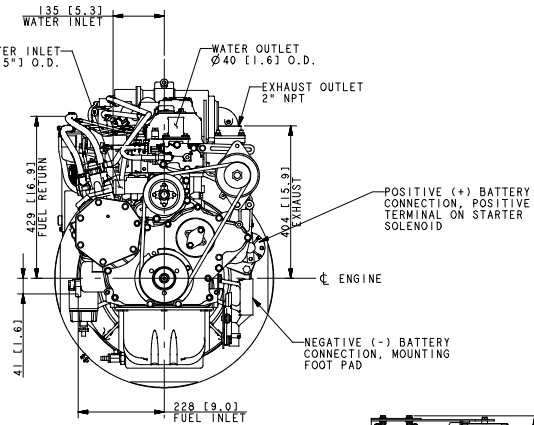
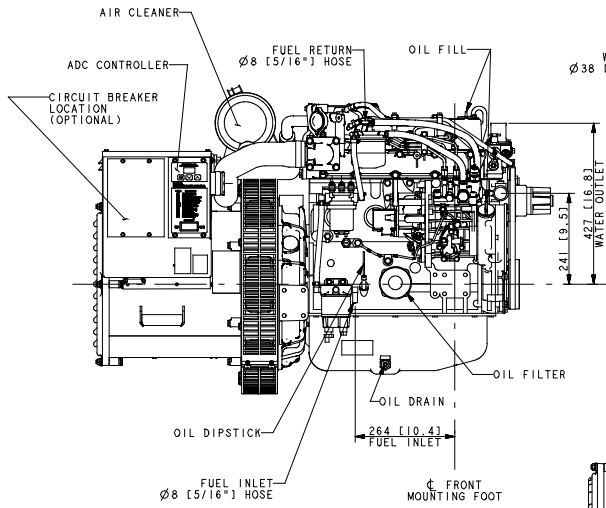
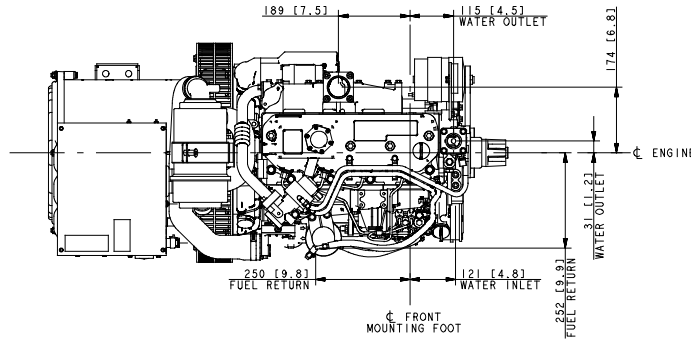
Specifications	4Q5 (1-phase)	4P5 (3-phase)
Manufacturer	Kohler	
Output reconnectable	Broad range	
Number of leads	4	12
Generator type	Rotating field	
Voltage regulator	Solid State	
Insulation—NEMA MG1-1.66		
Material	Class H	
Temperature rise*	130°C	
Bearing, number, type	1	
Coupling	Flexible disc	
Amortisseur windings	Full	
Voltage regulation		
no load to full load - %	$\pm 1.5\%$ maximum	
One step load acceptance		
% of rating per NFPA-110	100	
Peak motor starting kVa 60 Hz	140	
Peak motor starting kVa 50 Hz	72	

- Designed and built within NEMA, IEEE and ANSI standards for temperature rise.
- Skewed rotor for smooth voltage waveform.
- EORZDB/EFORZDB: brushless generator.
- Vacuum impregnated epoxy varnish—fungus resistant per MIL-I-24092.
- Sustains short circuit current at 300% of rated current up to 10 seconds.

\* In 25°C Ambient

## Accessories

- Remote Start Kit:
  - Remote digital gauge
  - Oil pressure sender (required to make digital gauge functional)
- Remote Cooling Systems:
  - Radiator with 12-volt DC fan
- Remote Panel Harnesses:
  - Remote harness (pigtail), 305 mm (12 in.)
  - Harness, 4.6 m (15 ft.)
  - Harness, 7.6 m (25 ft.)
- Exhaust Systems:
  - Silencer
  - Flex. stainless steel exhaust connector, 305 mm (12 in.)
  - Blanket, exhaust manifold and turbo
- Cooling Systems:
  - Block heater
- Engine and Generator:
  - Line circuit breakers
  - Airbag mounts
  - Preheat kit
- Isochronous Electronic Governor:
  - $\pm 0.25\%$  steady state frequency regulation



RADIATOR COOLING OPTION  
 MOUNTING FEET - NO SKID MOUNTING OPTION

ADV-7392-B

**DISTRIBUTED BY:**

NOTE: Dimensions are shown in mm [in.].  
 NOTE: This drawing is provided for reference only and is not intended for installation planning. Contact a local distributor for more detailed information.