

20 kW Mobile/Commercial Generator Set

Standard Features

- Kohler Co. provides one-source responsibility for the genset and accessories.
- Genset and components are prototype tested, factory built, and production tested.
- Unit is powered by a heavy-duty water-cooled diesel engine.
- Kohler PowerBoost™ system provides outstanding motor starting and sustained short circuit capability as well as consistent voltage regulation.
- Genset is four point mounted with vibration isolators on a heavy-duty skid.
- Genset is covered by a one year/1000 hour limited warranty.

Generator Ratings

Model Series	Voltage Code	Voltage	Amps	Hz	kW/kVA	PH
20CCO	61/67	120/240	166.67/83.3	60	20/20	1
20CCO	101/107	100/200	200/100	60	20/20	1
20CCFO	61/67	110/220	150/75	50	16.5/16.5	1
20CCFO	11/17	100/200	165/82.5	50	16.5/16.5	1
20CCFO	101/107	120/240	137.5/68.8	50	16.5/16.5	1
20CCFO	41/47	220	75	50	16.5/16.5	1
20CCOZ	01	120/240	60.1	60	20.0/25.0	3
20CCOZ	51	139/240	60.1	60	20.0/25.0	3
20CCOZ	51	127/220	65.6	60	20.0/25.0	3
20CCOZ	71	227/480	30.1	60	20.0/25.0	3
20CCOZ	71	240/416	34.7	60	20.0/25.0	3
20CCOZ	81	120/208	69.4	60	20.0/25.0	3
20CCFOZ	51	110/190	62.8	50	16.5/20.6	3
20CCFOZ	51	115/200	57.7	50	16.0/20.0	3
20CCFOZ	71	220/380	31.3	50	16.5/20.6	3
20CCFOZ	71	230/400	30.0	50	16.5/20.6	3
20CCFOZ	71	240/416	28.0	50	16.0/20.0	3
20CCFOZ	81	120/208	55.5	50	16.0/20.0	3
20CCFOZ	81	110/220	51.5	50	15.7/19.6	3

RATINGS: Ratings are continuous for the duration of any power outage. All single-phase units are rated at 1.0 power factor. All 3-phase units are rated at 0.8 power factor. DERATION: Maximum altitude before generator deration, ft. (m): 1000 (305). Altitude deration factor, % per 500 ft. (150 m): 3.5. Maximum intake air temperature before generator deration, °F (°C): 85 (29). Temperature deration factor, % per 10°F (5.5°C): 1.

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 Co. generator distributor for availability.

Generator Weights and Dimensions

1 Phase 20CCO	In-line Radiator	Remote Radiator
Weight—dry, lbs. (kg)	730 (331)	695 (315)
Length, in. (mm)	45.02 (1144)	45.02 (1144)
Width, in. (mm)	20.99 (533)	20.99 (533)
Height, in. (mm)	28.00 (711)	27.25 (692)

3 Phase 20CCOZ	In-line Radiator
Weight—dry, lbs. (kg)	730 (331)
Length, in. (mm)	46.62 (1184)
Width, in. (mm)	20.99 (533)
Height, in. (mm)	28.00 (711)

Application Data

Engine

Engine Specifications	60 Hz	50 Hz
Engine	Yanmar	
Model, type	4TN84TE-RK, 4 cycle	
Cylinder arrangement	4, In-line	
Bore and stroke, in. (mm)	3.307 (84) x 3.386 (86)	
Compression ratio	16.99:1	
Combustion system	Direct injection	
Main bearings	Replaceable sleeve	
Rated rpm	1800	1500
Rated horsepower, continuous	36.3	28.6
Cylinder block material	Cast iron	
Cylinder head material	Cast iron	
Crankshaft	Horizontal	
Connecting rod material	Forged carbon steel	
Governor, type	Mechanical	
Injection pump	Yanmar YPES	
Frequency regulation No load to full load	±5%	

Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Ignition		
Battery voltage	12	
Battery recommendation, min	625 cold cranking amps, 100 amp/hr.	
Starter motor	Gear-reduction type	

Fuel

Fuel System	60 Hz	50 Hz
Fuel pump	Electric	
Maximum lift, in. (m)	39 (1)	
Fuel Type	Diesel Fuel ASTM D975 No. 2-D	

Cooling

Cooling System	60 Hz	50 Hz
Type	Liquid	
Capacity, qts. (L) engine jacket	2.85 (2.7)	

Lubrication

Lubricating System	60 Hz	50 Hz
Type	Pressure	
Oil capacity, qts. (L)	6.1 (5.8)	
Oil filter	Full flow, cartridge	

Operation Requirements

Air Requirements	60 Hz	50 Hz
Engine combustion air requirements cfm (m ³ /min.)	70 (2)	
Engine/Generator cooling requirements cfm (m ³ /min.)	1930 (55)	
Total air requirements cfm (m ³ /min.)	2000 (57)	

Fuel Consumption	60 Hz	50 Hz
Diesel, gph (Lph) at % load		
100%	1.67 (6.3)	1.33 (5.0)
75%	1.26 (4.8)	1.03 (3.9)
50%	0.91 (3.4)	0.75 (2.8)
25%	0.60 (2.3)	0.50 (1.9)

Engine

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
- Battery charging alternator (40 amp)
- Lifting eye
- Heavy-duty, dry-type air cleaner
- Focused vibromounts

Controller

Controller Features:

- Three position stop/start switch with engine preheat
- Starter interlock
- Low oil pressure cutout
- High water temperature cutout
- Easy to service and install.
- Remote switch connection plug
- Hourmeter

Application Data

PowerBoost™ Generator

Accessories and Options

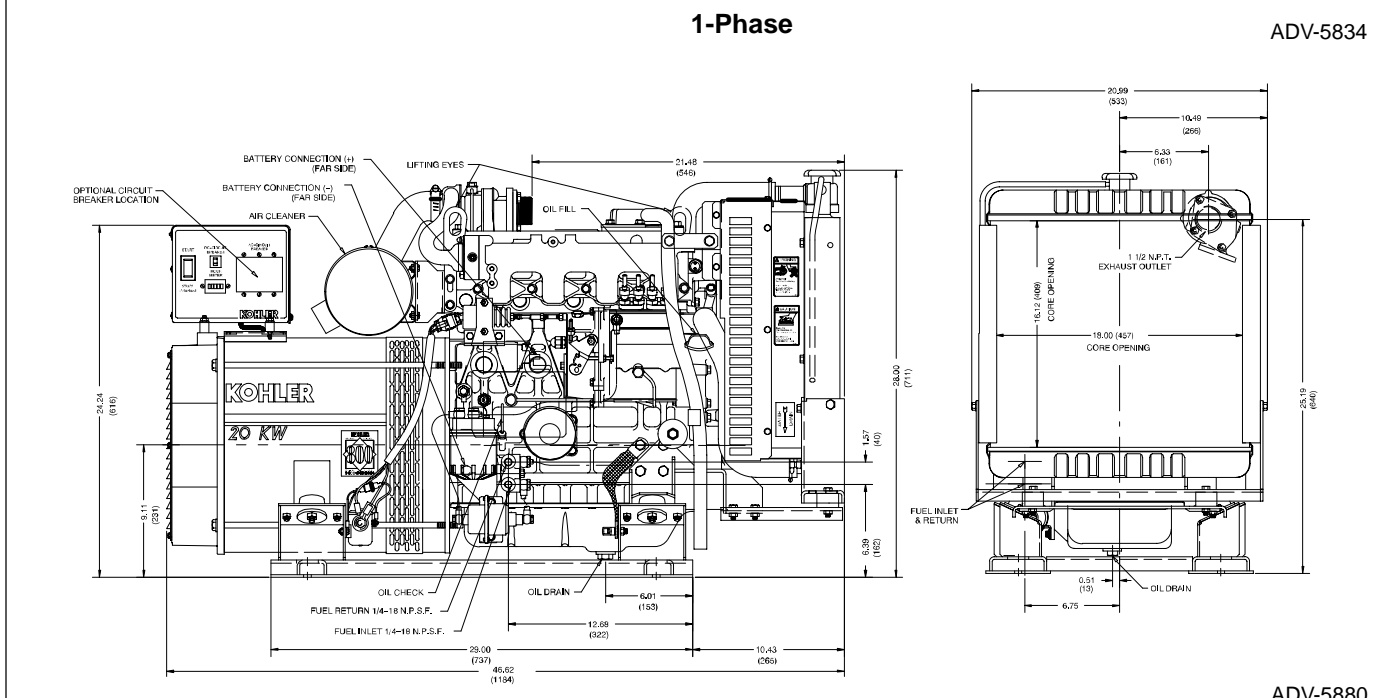
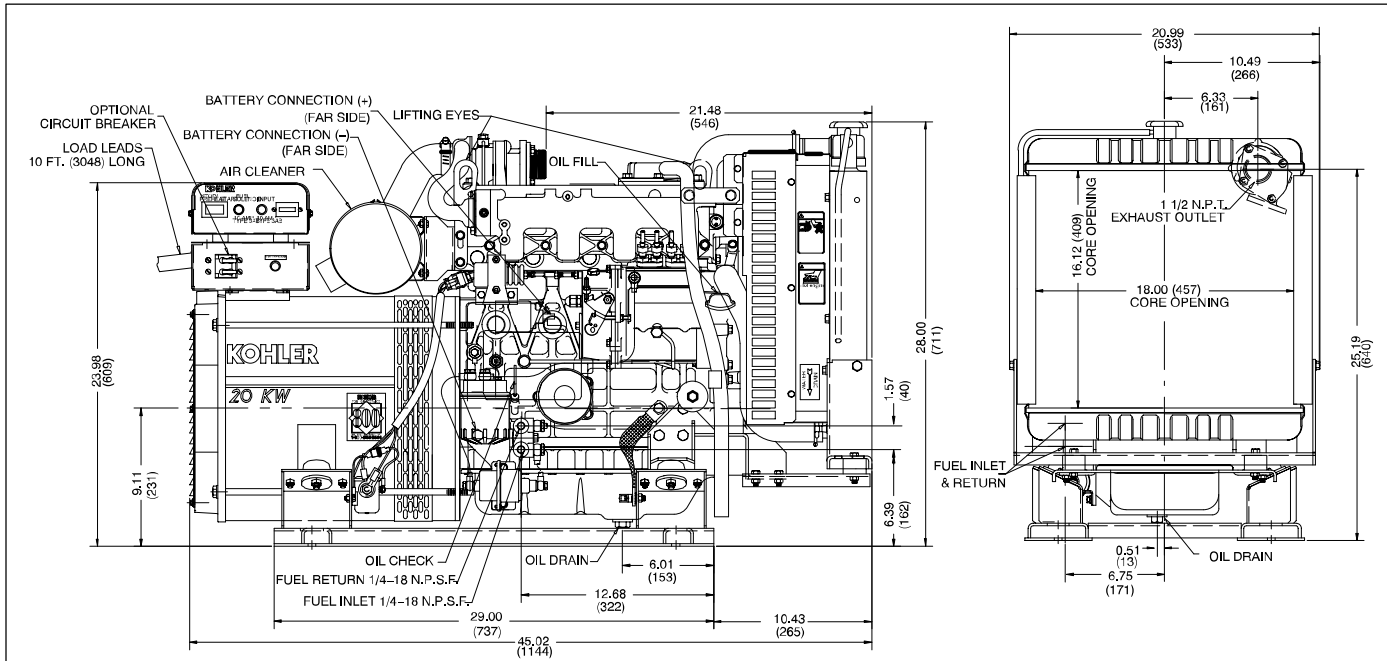
Specifications	4H7 (1-phase)	4J7 (3-phase)
Manufacturer	Kohler	
Output reconnectable	Broad range	Broad range
Number of leads	4	12
Generator type	Rotating field	
Voltage regulator	Solid State	
Insulation—NEMA MG1-1.66	Class F	
Material	130°C	
Temperature rise*	1	
Bearing, number, type	Flexible disc	
Coupling	Full	
Amortisseur windings	Full	
Voltage regulation	±2% maximum	
no load to full load – %		
One step load acceptance	100	
% of rating per NFPA-110		
Peak motor starting kVa 60 Hz	38	47.5
Peak motor starting kVa 50 Hz	26	35.3

- Rotating field design permits power to be obtained from stationary leads.
- Designed and built within NEMA, IEEE and ANSI standards for temperature rise.
- Single-phase: static excited. Three-phase brushless exciter.
- Skewed rotor for smooth voltage waveform.
- Self-ventilated, drip proof construction.
- 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.

Get the most from your generator set by equipping it with Kohler accessories. Built to work reliably with the power plant.

<p>Remote Start Kits (1 Phase only)</p> <p><input type="checkbox"/> Remote Start Panel</p> <p><input type="checkbox"/> Remote Start and 2 Meter Panel Kit* (Oil pressure and water temperature)</p> <p><input type="checkbox"/> Remote Start and 4 Meter Panel Kit* (Oil pressure, water temperature, DC voltmeter, and hourmeter)</p> <p><input type="checkbox"/> Engine Sender Kit</p> <p>*Requires engine sender kit.</p>
<p>Remote Cooling Systems (1 Phase only)</p> <p><input type="checkbox"/> 20CCO Radiator with 12-volt DC Suction Fan.</p>
<p>Harnesses for Remote Mounting of Controller (1 Phase only)</p> <p><input type="checkbox"/> Remote Harness, length 7.5 feet (2.3 m)</p> <p><input type="checkbox"/> Remote Harness, length 15 feet (4.6 m)</p>
<p>Remote Panel Harnesses (1 Phase only)</p> <p><input type="checkbox"/> 12 in. (305 mm) Remote Harness (Pigtail)</p> <p><input type="checkbox"/> 15 ft. (4.6 m) Harness</p> <p><input type="checkbox"/> 25 ft. (7.6 m) Harness</p>
<p>Exhaust Systems</p> <p><input type="checkbox"/> Silencer</p> <p><input type="checkbox"/> Flexible Exhaust Connector 12 in. (305 mm) (Stainless Steel)</p> <p><input type="checkbox"/> Blanket, Exhaust Manifold and Turbo.</p>
<p>Cooling System</p> <p><input type="checkbox"/> Block Heater</p>
<p>Fuel System</p> <p><input type="checkbox"/> Fuel Water Separator</p> <p><input type="checkbox"/> Flex Fuel Lines</p>



DISTRIBUTED BY:

NOTE: Dimensions in () are millimeter equivalents.

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