KOHLER.

Models: 20RCA(L)

Multi-Fuel
LPG/Natural Gas

ISO 9001 KOHLER. NATIONALLY REGISTERED



The Kohler® Advantage

- **High Quality Power**
  Kohler home generators provide advanced voltage and frequency regulation along with ultra-low levels of harmonic distortion for excellent generator power quality to protect your valuable electronics.
- **Premium 5-yr/2000-hr Limited Warranty Included**
  Kohler is known for extraordinary reliability and performance. Kohler's premium limited warranty covers parts, labor, and travel for the full warranty period.
- **Powerful Performance**
  Exclusive Powerboost™ technology provides excellent starting power. §
- **Aluminum Enclosure**
  - Attractive aluminum enclosure allows installation as close as 18 inches from your home or small business. †
  - Enclosure panels can be removed without tools to allow easy access for maintenance and service.
- **Enclosure Options** for single-phase units
  - **Kohler® Exclusive Colors** are available. Go to KohlerGenerators.com to see the latest colors.
  - **Camouflage Enclosures** are available (optional). Go to KohlerGenerators.com/MossyOak to view the available patterns.

Mossy Oak is a trademark used under license from Haas Outdoors, Inc., by Kohler Co.

Standard Features

- **RDC2 Controller**
  - One digital controller manages both the generator set and transfer switch functions (with optional Model RXT).
  - Electronic speed control responds quickly to varying demand.
  - OnCue® Plus Generator Management System for remote monitoring is included with the generator.
- **Kohler Command PRO Engine Features**
  - Kohler Command PRO® OHV engine with hydraulic valve lifters for reliable performance without routine valve adjustment or lengthy break-in requirements.
- **Designed for Easy Installation**
  - Sturdy aluminum base can be mounted on gravel or a concrete mounting pad.
  - Fuel and electrical connections through the enclosure wall eliminate the need for stub-ups through the base.
  - Customer connection terminal block located near the controller allows easy access for field wiring.
  - Designed for outdoor installation only.
- **Certifications**
  - Meets emission regulations for U.S. Environmental Protection Agency (EPA) with both natural gas and LPG.
  - UL 2200/cUL listed.
  - Accepted by the Massachusetts Board of Registration of Plumbers and Gas Fitters.
  - Meets 181 mph wind rating.
- Approved for stationary standby applications in locations served by a reliable utility source (on-grid).
- **Exercise Modes**
  - Unloaded weekly exercise with complete system diagnostics (20 minutes).
  - Unloaded full-speed exercise (20 minutes).
  - Loaded full-speed exercise (20 minutes; Model RXT ATS required).
- Model 20RCAL includes a model RXT automatic transfer switch. See last page for more details.

Generator Ratings

					Standby Ratings					
					Natural Gas		LPG		Line Circuit Breaker	
Model	Alt	Voltage	Ph	Hz	kW/kVA	Amps	kW/kVA	Amps	Amps	Poles
20RCA 20RCAL	2F7	120/240	1	60	18/18	75	20/20	84	100	2
20RCA	2G7	120/208	3	60	17/21	59	17/21	59	70	3
		120/240	3	60	17/21	51	17/21	51	60	3
		277/480	3	60	17/21	26	17/21	26	30	3

Note: The line circuit breaker is automatically selected based on the generator set model and voltage configuration.

RATINGS: Standby ratings apply to installations served by a reliable utility source. All single-phase units are rated at 1.0 power factor. The standby rating is applicable to variable loads with an average load factor of 80% for the duration of the power outage. No overload capacity is specified at this rating. Ratings are in accordance with ISO-3046/1, BS5514, AS2789, and DIN 6271. GENERAL GUIDELINES FOR DERATING: *ALTITUDE*: Derate 4% per 305 m (1000 ft.) elevation above 153 m (500 ft.). *TEMPERATURE*: Derate 2% per 5.5°C (10°F) temperature increase above 16°C (60°F). Availability is subject to change without notice. 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 Co. generator dealer for availability.

§ Check the appliance manufacturer's specifications for actual power requirements. Consult a Kohler® Power Systems professional to calculate your exact residential power system requirements.

† Meets NFPA guidelines for 18 inch clearance to combustible materials. Check state and local codes for minimum distance required from a structure.

Alternator Specifications

Alternator Specifications

Specifications		Alternator
Manufacturer		Kohler
Type		2-Pole, Rotating Field
Leads, quantity		
2F7		4
2G7		12
Voltage regulator		Digital
Insulation:		NEMA MG1-1.66
Material		Class H
Temperature rise		130°C Standby
Bearing: quantity, type		1, Sealed
Coupling		Direct
Amortisseur windings		Full
Voltage regulation, no-load to full-load RMS		±1.0%
One-step load acceptance		100% of Rating
Peak motor starting kVA:	(35% dip for voltages below)	
240 V, 1 ph	2F7 (4 lead)	41 (60 Hz)
240 or 480 V, 3 ph	2G7 (12 lead)	69 (60 Hz)

Alternator Features

- Compliance with NEMA, IEEE, and ANSI standards for temperature rise.
- Self-ventilated and dripproof construction.
- Windings are vacuum-impregnated with epoxy varnish for dependability and long life.
- Superior voltage waveform and minimum harmonic distortion from skewed alternator construction.
- Digital voltage regulator with ±1.0% no-load to full-load RMS regulation.
- Rotating-field alternator with static exciter for excellent load response.
- Total harmonic distortion (THD) from no load to full load with a linear load is less than 5%.

Application Data

Engine

Engine Specifications	
Manufacturer	Kohler
Engine: model, type	CH1000 4-Cycle
Cylinder arrangement	V-2
Displacement, cm^3 (cu. in.)	999 (61)
Bore and stroke, mm (in.)	90 x 78.5 (3.54 x 3.1)
Compression ratio	8.8:1
Main bearings: quantity, type	2, Heavy-Duty Sleeve Bearings
Rated RPM	3600
Max. engine power at rated rpm, kW (HP)	
LPG	23.0 (30.9)
Natural gas	20.2 (27.1)
Cylinder head material	Aluminum
Valve material	Steel/Stellite®
Piston type and material	Aluminum Alloy
Crankshaft material	Heat Treated, Ductile Iron
Governor: type	Electronic
Frequency regulation, no load to full load	Isochronous
Frequency regulation, steady state	±0.5%
Air cleaner type	Dry

Engine Electrical

Engine Electrical System	
Ignition system	Electronic, Capacitive Discharge
Starter motor rated voltage (DC)	12
Battery (purchased separately):	
Ground	Negative
Volts (DC)	12
Battery quantity	1
Recommended cold cranking amps:	
(CCA) rating for -18°C (0°F)	500
Group size	51

Exhaust

Exhaust System	
Exhaust temperature exiting the enclosure at rated kW, dry, °C (°F)	260 (500)

Lubrication

Lubricating System	
Type	Full Pressure
Oil capacity (with filter), L (qt.) §	1.9 (2.0)
Oil filter: quantity, type §	1, Cartridge
Oil cooler	Integral

§ Kohler recommends the use of Kohler Genuine oil and filters.

Fuel Requirements

Fuel System	
Fuel types	Natural Gas or LPG
Fuel supply inlet	1/2 NPT
Fuel supply pressure, kPa (in. H_2O):	
Natural gas	0.9- 2.7 (3.5-11)
LP	1.7- 2.7 (7-11)

Fuel Composition Limits *	Nat. Gas	LPG
Methane, % by volume (minimum)	90 min.	—
Ethane, % by volume (maximum)	4.0 max.	—
Propane, % by volume	1.0 max.	85 min.
Propene, % by volume (maximum)	0.1 max.	5.0 max.
C_4 and higher, % by volume	0.3 max.	2.5 max.
Sulfur, ppm mass (maximum)	25 max.	
Lower heating value, MJ/m^3 (Btu/ft^3), (minimum)	33.2 (890)	84.2 (2260)

* Contact your local dealer for suitability and rating derates based on fuel compositions outside these limits.

Fuel Pipe Size

Minimum Gas Pipe Size Recommendation, in. NPT

Pipe Length, m (ft.)	Natural Gas 281,000 Btu/hr.	LPG 340,000 Btu/hr.
8 (25)	1	3/4
15 (50)	1	1
30 (100)	1 1/4	1
46 (150)	1 1/4	1 1/4
61 (200)	1 1/4	1 1/4

Generator Set Sound Data

Model 20RCA average sound levels are 66 dB(A) during weekly engine exercise and 70 dB(A) during full-speed generator diagnostics and normal operation.*

All sound levels are measured at a distance of 23 ft. (7 m) from the generator set.

* Lowest of 8 points measured around the generator. Sound levels at other points around generator may vary depending on installation parameters.

Operation Requirements

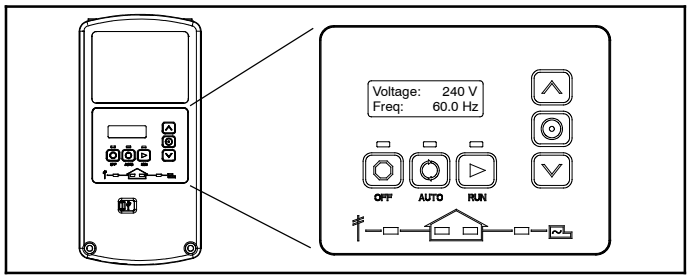
Fuel Consumption, m^3/hr. (cfh) @ 60Hz

% Load	Natural Gas		LPG	
100	8.0	(281)	3.9	(136)
75	6.9	(243)	3.1	(109)
50	4.6	(161)	2.3	(82)
25	3.6	(127)	1.7	(59)
Exercise	2.0	(71)	1.0	(35)

Nominal fuel rating: Natural gas: 37 MJ/m^3 (1000 Btu/$ft.^3$)
LPG: 93 MJ/m^3 (2500 Btu/$ft.^3$)

LPG conversion factors: 8.58 $ft.^3$ = 1 lb.
0.535 m^3 = 1 kg
36.39 $ft.^3$ = 1 gal.

RDC2 Controller Features



The RDC2 controller provides integrated control for the generator set, Kohler® Model RXT transfer switch, programmable interface module (PIM), and load shed kit.

- Membrane keypad:
  - OFF, AUTO, and RUN pushbuttons
  - Select and arrow buttons for access to system configuration and adjustment menus
- LED indicators for OFF, AUTO, and RUN modes
- LED indicators for utility power and generator set source availability and ATS position (Model RXT transfer switch required)
- LCD display:
  - Two lines x 16 characters per line
  - Backlit display with adjustable contrast for excellent visibility in all lighting conditions
- Scrolling system status display:
  - Generator set status
  - Voltage and frequency
  - Engine temperature
  - Oil pressure
  - Battery voltage
  - Engine runtime hours
- Date and time displays
- Smart engine cooldown senses engine temperature
- Digital isochronous governor maintains steady-state speed at all loads
- Digital voltage regulation: ±1.0% RMS no-load to full-load
- Automatic start with programmed cranking cycle
- Built-in 2.5 amp battery charger
- Programmable exerciser can be set to start automatically on any future day and time
- Exercise modes:
  - Unloaded weekly 20-minute exercise with complete system diagnostics
  - Unloaded 20-minute full-speed exercise
  - Loaded 20-minute full-speed exercise (Model RXT ATS required)
- Weekly, bi-weekly, or new monthly exercise intervals
- Front-access mini USB connector for SiteTech™ or USB Utility connection
- Integral Ethernet connector for Kohler® OnCue® Plus
- Remote two-wire start/stop capability for optional connection of a Model RDT transfer switch
- Diagnostic messages: Displays diagnostic messages for the engine, generator, Model RXT transfer switch, programmable interface module (PIM), and load management device.
- Maintenance reminders
- System settings:
  - System voltage, frequency, and phase
  - Voltage adjustment
  - Measurement system, English or metric
- ATS status (Model RXT ATS required):
  - Source availability
  - ATS position (normal/utility or emergency/generator)
  - Source voltage and frequency
- ATS control (Model RXT ATS required):
  - Source voltage and frequency settings
  - Engine start time delay
  - Transfer time delays
  - Voltage calibration
  - Fixed pickup and dropout settings
- Programmable Interface Module (PIM) status displays:
  - Input status (active/inactive)
  - Output status (active/inactive)
- Load control menus:
  - Load status
  - Test function

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KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
KOHLERPower.com

Generator Set Standard Features

- Aluminum sound enclosure (cashmere color standard)
- Battery cables
- Critical silencer
- EPA certified fuel system
- Field-connection terminal block
- Fuel solenoid valve and secondary regulator
- Line circuit breaker
- Multi-fuel system, LPG/natural gas, field-convertible
- Oil drain extension with shutoff valve
- Oil pressure sensor
- OnCue® Plus Generator Management System
- Premium 5-year/2000 hour limited standby warranty. Covers parts, labor, and travel for the entire warranty period
- RDC2 generator set/ATS controller
- Rodent-resistant construction
- Sound-deadening, flame-retardant foam per UL 94, class HF-1

Available Options

Concrete Mounting Pads

❑ Concrete mounting pad, 3 in. thick
❑ Concrete mounting pad, 4 in. thick (recommended for storm-prone areas)

Electrical Accessories

❑ Battery
❑ Battery heater, 120 VAC *
❑ Carburetor heater, 120 VAC †
❑ Cold weather package, 120 VAC †‡
  ○ Includes oil and breather tube heaters. fuel regulator heater, battery heater, alternator brush cover and pressure sensor cover
❑ Emergency stop kit
❑ PowerSync® Automatic Paralleling Module (APM) (single phase only; parallel two 20kW residential generator sets with the RDC2 controller)
❑ Programmable interface module (PIM) (provides 2 digital inputs and 6 relay outputs)

* Battery heater is recommended below -17°C (0°F).
† Do not use a carburetor heater with a cold weather kit.
‡ Cold weather kit is recommended below 0°C (32°F).

Enclosure Options (single-phase only)

❑ Kohler® Exclusive Colors
Go to KohlerGenerators.com to see the latest colors.
❑ Mossy Oak® camouflage enclosures
Go to KohlerGenerators.com/MossyOak to see available patterns.
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Fuel System Accessories

❑ Flexible fuel line (included on QS models)

Literature

❑ General maintenance literature kit
❑ Overhaul literature kit
❑ Production literature kit

Maintenance

❑ Maintenance kit (includes air filter, oil, oil filter, and spark plugs)

Automatic Transfer Switches and Accessories

❑ Model RDT ATS
❑ Model RXT ATS
❑ Model RXT ATS with combined interface/load management board
❑ Load shed kit for RXT or RDT
❑ Power relay modules (use up to 4 relay modules for each load management device)
❑ Other Kohler® ATS

20RCAL Model Package

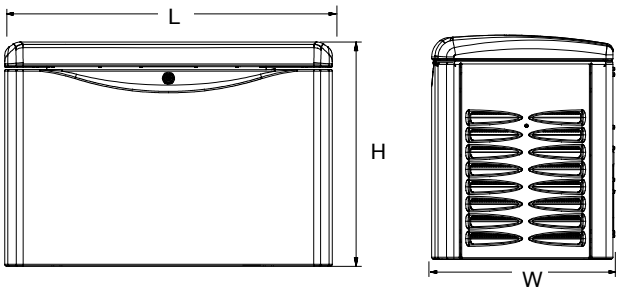
❑ 20RCAL with 200 amp service entrance-rated RXT ATS with combined interface/load management board and corrosion-resistant NEMA 3R aluminum enclosure

Warranty

❑ 7- Year Limited Warranty
❑ 10- Year Limited Warranty
Warranties cover parts, labor, and travel for the entire warranty period.

Generator Set Dimensions and Weights

Generator Set Size, L x W x H:	1193 x 660 x 820 mm (47 x 26.0 x 32.3 in.)
Shipping Weights:	
20RCA Generator Set:	252 kg (555 lb.)
20RCAL with 200 A RXT SE ATS:	272 kg (600 lb.)



NOTE: Dimensions are provided for reference only and should not be used for planning installation. Contact your local dealer for more detailed information.

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