



## Standard Features

- **RDC2 Controller**
  - One digital controller manages both the generator set and transfer switch functions (with optional Model RXT transfer switch).
  - Designed for today's most sophisticated electronics.
  - Electronic speed control responds quickly to varying household demand.
  - Digital voltage regulation protects your sensitive electronics from harmonic distortion and unstable power quality.
  - Two-line, backlit LCD display with adjustable contrast is easy to read, even in direct sunlight or low light.
  - OnCue® Plus Generator Management System for remote monitoring is included with every generator.
- **Kohler Engine Features**
  - Kohler Series 7000 V-twin engine with efficient OHV design
  - Powerful, reliable air-cooled performance
  - Simple field conversion between natural gas and LPG fuels while maintaining emission certification
- **Designed for Easy Installation**
  - Steel base
  - Hinged, locking roof
  - Fuel and electrical connections through the enclosure wall eliminate the need for stub-ups through the bottom
  - Accepts natural gas fuel pressure as low as 3.5 inches
  - Load connection terminal block allows easy field wiring
  - Designed for outdoor installation only
- Approved for stationary standby applications in locations served by a reliable utility source
- Meets 181 mph wind rating
- **Certifications**
  - Meets emission regulations for U.S. Environmental Protection Agency (EPA) 40 CFR 60 stationary source standards with both LPG and natural gas.
  - Note:** CARB does not regulate emergency standby generators outputting less than 50 HP. Only the EPA standards apply.
  - UL 2200 listed (60 Hz model)
  - Accepted by the Massachusetts Board of Registration of Plumbers and Gas Fitters.

## 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.

### • Extraordinary Reliability

Kohler is known for extraordinary reliability and performance and backs that up with a 5-year or 2000 hour limited warranty.

### • Powerful Performance

Exclusive Powerboost™ technology provides excellent starting power. The Kohler 12 kW generator can easily start and run a 5 ton air conditioner with up to 5 kW pre-load.\*

### • Enclosure

Bold new Kohler design in steel, dipped in e-coat for extra corrosion protection and painted with a durable powder coat finish

### • Quiet Operation

Kohler home generators provide quiet, neighborhood-friendly performance.

## Generator Ratings

Model	Voltage	Phase	Hz	Alternator	Standby Ratings			
					Natural Gas		LPG	
					kW/kVA	Amps	kW/kVA	Amps
12RESV	115/230	1	50	2F4	9.3/9.3	40.4	10/10	43.5

**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 distributor 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.

# Alternator Specifications

## Alternator Specifications

Specifications	PowerBoost™ Generator 1-Phase	
Manufacturer	Kohler	
Output reconnectable	115/230	
Type	2-Pole, Rotating Field	
Leads, quantity	4	
Voltage regulator	Digital	
Insulation:	NEMA MG1-1.66	
Material	Class H	
Temperature rise	Class H	
Bearing: quantity, type	1, Sealed Ball	
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)	
230 V, 2F3	(50 Hz)	13.2
230 V, 2F4	(50 Hz)	16.0

## 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	12RESV
Manufacturer	Kohler
Engine: model, type	KT725
Cylinder arrangement	V-2
Displacement, cm <sup>3</sup> (cu. in.)	725 (44)
Bore and stroke, mm (in.)	83 x 67 (3.3 x 2.6)
Compression ratio	9.0:1
Main bearings: quantity, type	2, Parent Material
Rated RPM	
50 Hz	3000
Max. engine power at rated rpm, kW (HP)	
LPG, 50 Hz	16 (21.4)
Natural gas, 50 Hz	13.4(18)
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	±1.0%
Air cleaner type	Dry

### Engine Electrical

Engine Electrical System	12RESV
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

### Lubrication

Lubricating System	12RESV
Type	Full Pressure
Oil capacity (with filter), L (qt.) *	1.9 (2.0)
Oil filter: quantity, type	1, Cartridge

\* Oil capacity for a new, dry engine.

### Fuel Pipe Size

Minimum Gas Pipe Size Recommendation, in. NPT		
	12RESV	
Pipe Length, m (ft.)	Natural Gas 216,000 Btu/hr.	LPG 257,500 Btu/hr.
8 (25)	3/4	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

## Fuel Requirements

Fuel System		12RESV	
Fuel types		Natural Gas or LPG	
Fuel supply inlet		1/2 NPT	
Fuel supply pressure, kPa (in. H <sub>2</sub> O):			
Natural gas		.87-2.7 (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 <sub>4</sub> and higher, % by volume		0.3 max.	2.5 max.
Sulfur, ppm mass (maximum)		25 max.	
Lower heating value, MJ/m <sup>3</sup> (Btu/ft <sup>3</sup> ), (minimum)		33.2 (890)	84.2 (2260)

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

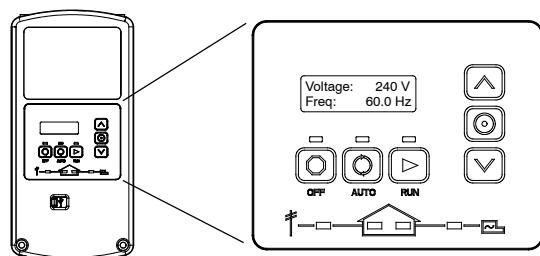
## Operation Requirements

Fuel Consumption			
Model	Fuel Type	% Load	Fuel Consumption, m <sup>3</sup> /hr. (cfh)
12RESV	Natural Gas	100	4.8 (170)
		75	3.8 (135)
		50	3.0 (106)
		25	2.5 (89)
		Exercise	2.1 (75)
	LPG	100	2.9 (103)
		75	2.2 (76)
		50	1.6 (57)
		25	1.2 (42)
		Exercise	0.8 (30)

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

LPG conversion factors: 8.58 ft.<sup>3</sup> = 1 lb.  
0.535 m<sup>3</sup> = 1 kg  
36.39 ft.<sup>3</sup> = 1 gal.

## RDC2 Controller



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

The RDC2 controller's 2-line LCD screen displays status messages and system settings that are clear and easy to read, even in direct sunlight or low light.

## RDC2 Controller Features

- 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 to maintain steady-state speed at all loads
- Digital voltage regulation: ± 1.0% RMS no-load to full-load
- Automatic start with programmed cranking cycle
- Programmable exerciser can be set to start automatically on any future day and time, and run every week or every two weeks
- Exercise modes
  - Unloaded weekly exercise with complete system diagnostics
  - Unloaded full-speed exercise
  - Loaded full-speed exercise (Model RXT ATS required)
- Front-access mini USB connector for SiteTech™ or USB Utility connection
- Integral Ethernet connector for Kohler® OnCue® Plus
- Built-in 2.5 amp battery charger
- Remote two-wire start/stop capability for optional connection of Model RDT or RSB transfer switches

See additional controller features on the next page.

## Sound Data

Model 12RESV 8 point logarithmic average sound levels are 67 dB(A) during weekly engine exercise and 71 dB(A) during full-speed generator diagnostics and normal operation. The lowest point sound levels are 64 dB(A) and 69 dB(A) respectively as compared to competitor ratings.\*

All sound levels are measured at 7 meters with no load.

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

## Additional RDC2 Controller Features

- Diagnostic messages
  - Displays diagnostic messages for the engine, generator, Model RXT transfer switch, programmable interface module (PIM), and load control module (LCM)
  - Over 70 diagnostic messages can be displayed
- 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 module (LCM) menus
  - Load status
  - Test function

## Generator Set Standard Features

- Battery cables
- Critical silencer
- EPA certified fuel system
- Field-connection terminal block
- Fuel solenoid valve and secondary regulator
- Line circuit breaker:
  - 12RESV: 50amps
- Multi-fuel system, LPG/natural gas, field-convertible
- Oil drain extension with shutoff valve
- OnCue® Plus Generator Management System
- RDC2 generator set/ATS controller
- Rodent-resistant construction
- Sound enclosure with sound-deadening, flame-retardant foam per UL 94, class HF-1
- 5-year limited warranty

## Available Accessories

### Approvals and Listings

CSA Approval (60 Hz only)

### Concrete Mounting Pads

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

## Available Accessories, Continued

### Controller Accessories

Programmable Interface Module (PIM)  
 (provides 2 digital inputs and 6 relay outputs)

Load Control Module (LCM)  
 (provides 4 power relays and 2 HVAC relays)

### Electrical System

Battery

### Fuel System

Flexible fuel line

### Maintenance

Maintenance kit

### Literature

General maintenance literature kit  
 Overhaul literature kit  
 Production literature kit

### Starting Aids

Carburetor heater, 120 VAC (recommended for reliable starting at temperatures below 0°C [32°F])

### Kohler® Automatic Transfer Switch

Model RXT, see specification sheet G11-121  
 Model RDT, see specification sheet G11-98  
 Model RSB, see specification sheet G11-101  
 Other Kohler® ATS

### Miscellaneous Accessories

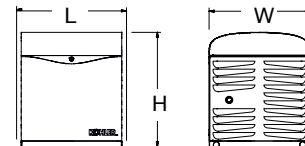
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\* Accessories are available through Kohler authorized distributors and dealers.

## Generator Set Dimensions and Weights

Overall Size, L x W x H: 777 x 712 x 824 mm  
 (30.6 x 28 x 32.4 in.)

Shipping Weight: 12RESV 196 kg (433 lb.)



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

### DISTRIBUTED BY:



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