KOHLER

Models: 10/12RESV(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.
- **Extraordinary Reliability**
  Kohler is known for extraordinary reliability and performance and backs that up with a 5-year or 2000 hour limited warranty.
- **Perfect for Tight Lot Lines**
  Can be placed as close as 18 inches from your home or small business, providing installation flexibility even on smaller lots. (Only applies to engine specification numbers GM88347-GA8, GM88347-GA9, or higher. Check state and local codes for minimum required distance from a structure.)
- **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 preload.*
- **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.

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
- 10RESVL and 12RESVL models packaged with a Model RXT automatic transfer switch are available. See page 4 and the Model RXT ATS specification sheet.
- 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.

Generator Ratings

					Standby Ratings			
					Natural Gas		LPG	
Model	Voltage	Phase	Hz	Alternator	kW/kVA	Amps	kW/kVA	Amps
10RESV	120/240	1	60	2F3	9/9	37.5	10/10	41.7
12RESV	120/240	1	60	2F4	11/11	45.8	12/12	50

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		120/240
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)
240 V, 2F3	(60 Hz)	16.8
240 V, 2F4	(60 Hz)	20.3

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	10RESV	12RESV
Manufacturer	Kohler	
Engine: model, type	KT725	
Cylinder arrangement	V-2	
Displacement, cm^3 (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		
60 Hz	3600	
Max. engine power at rated rpm, kW (HP)		
LPG, 60 Hz	16 (21.4)	
Natural gas, 60 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	

Exhaust

Exhaust System	10RESV	12RESV
Exhaust temperature exiting the enclosure at rated kW, dry, °C (°F)	106 (224)	106 (224)

Engine Electrical

Engine Electrical System	10RESV	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	10RESV	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

	10RESV		12RESV	
Pipe Length, m (ft.)	Natural Gas 179,000 Btu/hr.	LPG 222,500 Btu/hr.	Natural Gas 216,000 Btu/hr.	LPG 257,500 Btu/hr.
8 (25)	3/4	3/4	3/4	3/4
15 (50)	1	3/4	1	1
30 (100)	1	1	1-1/4	1
46 (150)	1 1/4	1	1-1/4	1 1/4
61 (200)	1 1/4	1 1/4	1 1/4	1 1/4

Fuel Requirements

Fuel System	10RESV	12RESV
Fuel types	Natural Gas or LPG	
Fuel supply inlet	1/2 NPT	
Fuel supply pressure, kPa (in. H_2O):		
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_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 distributor for suitability and rating derates based on fuel compositions outside these limits.

Operation Requirements

Fuel Consumption

Model	Fuel Type	% Load	Fuel Consumption, m^3/hr. (cfh)
10RESV	Natural Gas	100	5.1 (179)
		75	4.1 (145)
		50	3.4 (120)
		25	2.7 (97)
		Exercise	2.1 (75)
	LPG	100	2.5 (89)
		75	2.0 (69)
		50	1.5 (52)
		25	1.1 (39)
		Exercise	0.8 (29)
12RESV	Natural Gas	100	6.1 (216)
		75	4.5 (160)
		50	3.6 (128)
		25	2.8 (99)
		Exercise	2.1 (74)
	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^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.

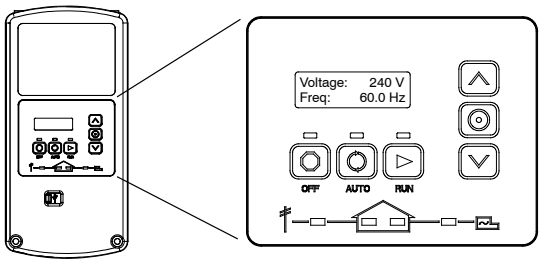
Sound Data

Model 10RESV and 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. For comparison to competitor ratings, the lowest point sound levels are 64 dB(A) and 69 dB(A) respectively.*

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.

RDC2 Controller



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

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 transfer switches

See additional controller features on the next page.

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For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
KOHLERPower.com

Additional RDC2 Controller Features

- Diagnostic messages
  - Displays diagnostic messages for the engine, generator, Model RXT transfer switch, programmable interface module (PIM), and load management
  - 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 menus

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:
  10RESV: 50 amps
  12RESV: 60 amps
- 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)

Electrical System

❑ Battery

Fuel System

❑ Flexible fuel line

Available Accessories, Continued

Controller Accessories

❑ Programmable Interface Module (PIM) (provides 2 digital inputs and 6 relay outputs)
❑ Load shed kit
❑ Power relay modules (use up to 4 modules for each load management device)

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 RXT with combined interface/load management board
❑ Other Kohler® ATS

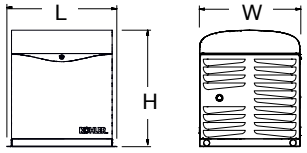
10/12RESVL Model Packages

❑ 10RESVL with 100 amp RXT with 12-space load center and NEMA 1 steel enclosure for indoor installation
❑ 12RESVL with 100 amp RXT with 12-space load center and NEMA 1 steel enclosure for indoor installation

* 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:	
10RESV Generator Set	194 kg (428 lb.)
12RESV Generator Set	196 kg (433 lb.)
10RESVL w/ATS	203 kg (448 lb.)
12RESVL w/ATS	205 kg (453 lb.)



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

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