Models: 10/12RESVL

KOHLER. Power Systems

Multi-Fuel LPG/Natural Gas





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-GA11, GM88347-GA12, 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

DC2 Controller

- One digital controller manages both the generator set and Model RXT transfer switch functions
- 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 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

- o Steel base
- o 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

Model RXT Transfer Switch

- 100 amp ATS w/NEMA 1 enclosure with 12-space load center for indoor installation is included
- See page 4 for additional information

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.

- o 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	ì
Model	Voltage	Phase	Hz	Alternator	kW/kVA	Amps	kW/kVA	Amps
10RESVL	120/240	1	60	2F3	9/9	37.5	10/10	41.7
12RESVL	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 GUIDE-LINES 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.
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Alternator Specifications

Alternator Specifications

	PowerBoost™ Generator			
Specifications	1-Phase			
Manufacturer		Kohler		
Output reconnectable		120/240		
Туре		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 acceptar	100% of Rating			
Peak motor starting kV	(35% dip for voltages below)			
240 V, 2F3	(60 Hz)	16.8		
240 V, 2F4	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

g				
Engine Specifications	10RESVL	12RESVL		
Manufacturer	Kohler			
Engine: model, type	KT	725		
Cylinder arrangement	V-	V-2		
Displacement, cm ³ (cu. in.)	725	(44)		
Bore and stroke, mm (in.)	83 x 67 (3	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 (2	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	10RESVL	12RESVL
Exhaust temperature exiting the		_
enclosure at rated kW, dry, °C (°F)	106 (224)	106 (224)

Engine Electrical System

Engine Electrical System	10RESVL	12RESVL		
Ignition system	Electi	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	5	1		

Lubrication

Lubricating System	10RESVL	12RESVL	
Туре	Full Pr	essure	
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							
	10R	ESVL	12RESVL				
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	10RESVL	12RESVL	
Fuel types	Natural Gas or LPG		
Fuel supply inlet	1/2 NPT		
Fuel supply pressure, kPa (in. H ₂ O):			
Natural gas	.87-2.7 (3.5-11)		
LP	1.7-2.7	7 (7-11)	

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 ו	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 denates based				

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

Operation Requirements

Fuel Consumption						
	Fuel				_	
Model	Туре	% Load	Fuel C	onsump	otion, m ³ /hr. (cfh)	
		100	5.1	(179)		
		75	4.1	(145)		
	Natural Gas	50	3.4	(120)		
	Guo	25	2.7	(97)		
10RESVL		Exercise	2.1	(75)		
IUNESVL		100	2.5	(89)		
		75	2.0	(69)		
	LPG	50	1.5	(52)		
		25	1.1	(39)		
		Exercise	0.8	(29)		
		100	6.1	(216)		
		75	4.5	(160)		
	Natural Gas	50	3.6	(128)		
	aus	25	2.8	(99)		
12RESVL		Exercise	2.1	(74)		
12RESVL		100	2.9	(103)		
		75	2.2	(76)		
	LPG	50	1.6	(57)		
		25	1.2	(42)		
		Exercise	0.8	(30)		

Nominal fuel rating: Natural gas: 37 MJ/m³ (1000 Btu/ft.³) 93 MJ/m³ (2500 Btu/ft.³) I PG:

LPG conversion factors: $8.58 \text{ ft.}^3 = 1 \text{ lb.}$ $0.535 \text{ m}^3 = 1 \text{ kg}$

 $36.39 \text{ ft.}^3 = 1 \text{ gal.}$

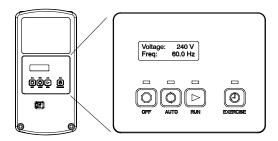
Sound Data

Model 10RESVL and 12RESVL 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.

DC2 Controller



The DC2 controller provides integrated control for the generator set, Kohler® Model RXT transfer switch, programmable interface module (PIM).

The DC2 controller's 2-line LCD screen provides a clear, easy-to-read display of status messages, even in direct sunlight or low light.

DC2 Controller Features

- OFF, AUTO, RUN, and EXERCISE pushbuttons
- · LED indicators for OFF, AUTO, RUN, and EXERCISE modes
- LCD display
 - o Two lines x 16 characters per line
 - o Backlit display with adjustable contrast for excellent visibility in all lighting conditions
- Scrolling system status display
 - o Generator set status
 - Voltage and frequency
 - Engine temperature
 - o Oil pressure
 - o Battery voltage
 - o Engine runtime hours
 - o Maintenance reminders
 - o OnCue® Plus status (connected/disconnected)
- Date and time displays
- Smart engine cooldown senses engine temperature
- Digital isochronous governor to maintain steady-state speed
- Digital voltage regulation: ±1.0% RMS no-load to full-load
- Automatic start with programmed cranking cycle
- Exercise modes
 - o 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
- Diagnostic messages
 - o Displays diagnostic messages for the engine, generator, Model RXT transfer switch, programmable interface module (PIM)
 - Over 70 diagnostic messages can be displayed
- A laptop computer and Kohler® SiteTech™ software can be used to change system settings or upgrade controller firmware.