Model: 15RYG

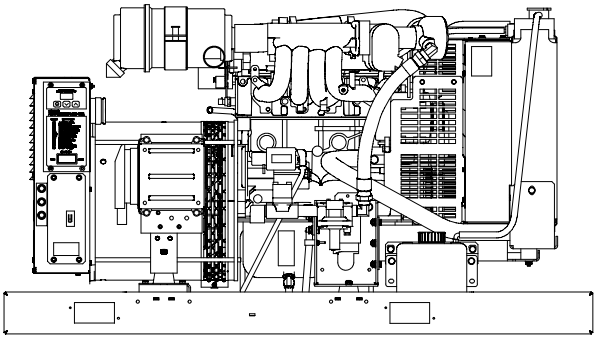
KOHLER POWER SYSTEMS

Gas

ISO 9001 KOHLER POWER SYSTEMS NATIONALLY REGISTERED

Ratings Range

		60 Hz
Standby:	**kW**	13.0–15.0
	kVA	13.0–18.8



Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The generator set accepts rated load in one step.
- UL 2200 listing and UL listing to Canadian safety standards available.
- A one-year limited warranty covers all systems and components. Two- and five-year extended warranties are also available.
- Integral vibration isolation eliminates the need for under-unit vibration spring isolators.
- Engine features:
  - Natural gas or LP fueled
  - Electronic engine controls for optimized fuel and spark performance
  - Four cylinder, four cycle engine
  - An electronic, isochronous governor for precise frequency regulation
  - High silicon content pistons for improved durability
- ADC 2100 digital controller features:
  - LED display provides diagnostic capability
  - Digital voltage regulator with ±1.5% no-load to full-load regulation
  - Superior electronics protection from corrosion and vibration
  - See more controller features inside

Generator Set Ratings

				Standby Ratings *			
				Natural Gas		LP Gas	
Alternator	**Voltage**	**Ph**	**Hz**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**
4H7	120/240	1	60	13.0/13.0	54	15.0/15.0	63
	120/208	3	60	13.0/16.2	45	15.0/18.8	52
	120/240	3	60	13.0/16.2	39	15.0/18.8	45
4J7	127/220	3	60	13.0/16.2	43	15.0/18.8	49
	139/240	3	60	13.0/16.2	39	15.0/18.8	45
	277/480	3	60	13.0/16.2	20	15.0/18.8	22

* RATINGS: All three-phase units are rated at 0.8 power factor. *Standby Ratings:* Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. Obtain the technical infomation bulletin on ratings guidelines (TIB-101) for complete ratings definitions. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. GENERAL GUIDELINES FOR DERATING: *Altitude:* Derate 1.5% per 305 m (1000 ft.) elevation above 1006 m (3300 ft.). *Temperature:* Derate 2.0% per 5.5°C (10°F) temperature above 21°C (70°F).

Alternator Specifications

Specifications		Alternator
Manufacturer		Kohler
Type		4-Pole, Brush Type
Leads: quantity, type		4 or 12, Reconnectable
Voltage regulator		Digital
Insulation:		NEMA MG1-1.66
Material		Class H
Temperature rise		130°C, Standby
Bearing: quantity, type		1, Sealed
Coupling		Flexible Disc
Amortisseur windings		Full
Voltage regulation, no-load to full-load RMS		±1.5%
One-step load acceptance		100% of Rating
Unbalanced load capability		100% of Rated Standby Current
Peak motor starting kVA:		(35% dip for voltages below)
240 V, 1-phase	4H7 (4 lead)	42
480 V, 3-phase	4J7 (12 lead)	62

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- The generator set complies with ISO 8528-5 requirements for transient performance.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the generator field.
- Self-ventilated and dripproof construction.
- Vacuum-impregnated windings with fungus-resistant epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.

Application Data

Engine

Engine Specifications	60 Hz
Manufacturer	GM
Engine: model, type	GM 1.6L OHC
Cylinder arrangement	4, Inline
Displacement, L (cu. in.)	1.6 (98)
Bore and stroke, mm (in.)	79 x 81.5 (3.11 x 3.21)
Compression ratio	9.4:1
Piston speed, m/min. (ft./min.)	293 (963)
Main bearings: quantity, type	5, Replaceable Inserts
Rated rpm	1800
Max. power at rated rpm, kWm (BHP)	19.0 (25.5)
Cylinder head material	Aluminum
Crankshaft material	Cast Iron
Valve (exhaust) material	High Alloy Steel
Governor type	Electronic
Frequency regulation, no load to full load	Isochronous
Frequency regulation, steady state	±0.5%
Air cleaner type, all models	Dry

Engine Electrical

Engine Electrical System	60 Hz
Battery charging alternator:	
Ground (negative/positive)	Negative
Volts (DC)	12
Ampere rating	70
Starter motor rated voltage (DC)	12
Battery, recommended cold cranking amps (CCA):	600
Battery voltage (DC)	12

Fuel

Fuel System		
Fuel type	LP Gas or Natural Gas	
Fuel supply inlet	3/4-14 NPT	
Fuel supply pressure kPa (in. H_2O)	1.74–2.74 (7-11)	
Fuel Composition Limits *	**Nat. Gas**	**LP Gas**
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, kJ/m^3 (Btu/ft^3), min.	26.6 (890)	67.5 (2260)

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

Exhaust

Exhaust System	60 Hz
Exhaust flow at rated kW, m^3/min. (cfm)	3.7 (131)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	649 (1200)
Maximum allowable back pressure, kPa (in. Hg)	10.2 (3.0)
Exhaust outlet size at engine hookup, mm (in.)	50.8 (2.0)

Lubrication

Lubricating System	60 Hz
Type	Full Pressure
Oil pan capacity, L (qt.)	3.2 (3.4)
Oil pan capacity with filter, L (qt.)	3.5 (3.7)
Oil filter: quantity, type	1, Cartridge

Application Data

Cooling

Standard Radiator System	60 Hz
Ambient temperature °C (°F)	50 (122)
Engine jacket water capacity, L (gal.)	3.3 (0.9)
Engine jacket water flow, Lpm (gpm)	37.8 (10.0)
Radiator system capacity, including engine, L (gal.)	11.5 (3.0)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	15.7 (895)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	390 (15.35)
Fan, kWm (HP)	1.2 (1.6)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.13 (0.5)

Operation Requirements

Air Requirements	60 Hz
Radiator-cooled cooling air, m^3/min. (scfm)‡	85 (3000)
Combustion air, m^3/min. (cfm)	0.7 (25)
Heat rejected to ambient air:	
Engine, kW (Btu/min.)	35.7 (2032)
Alternator, kW (Btu/min.)	2.9 (165)

‡ Air density = 1.20 kg/m^3 or 0.075 lbm/ft^3

Fuel Consumption	60 Hz
Natural Gas, m^3/hr. (cfh) at % load	
100%	5.7 (200)
75%	4.5 (160)
50%	3.5 (125)
25%	2.5 (90)
LP Gas, m^3/hr. (cfh) at % load	
100%	2.4 (85)
75%	1.8 (65)
50%	1.4 (51)
25%	1.0 (37)

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

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

Sound Data

Average Sound Levels at 7 m (23 ft.), with full load

Enclosure Type	Sound Level, dBA
Weather Enclosure	73
Weather Enclosure w/Sound Upfit Kit	69
Sound Enclosure	63

Controller

Advanced Digital Control Features

- Compact controller
- Integrally mounted to the generator set
- LED display:
  - Runtime hours
  - Crank cycle status
  - Diagnostics
  - Application software version
- LED display communicates faults:
  - Auxiliary fault
  - High battery voltage
  - High engine temperature
  - Low battery voltage
  - Low oil pressure
  - Overcrank safety
  - Overspeed
  - Overfrequency
  - Overvoltage
  - Underfrequency
  - Undervoltage
- Membrane keypad for configuration and adjustment
  - Password-protected user access to menus
  - Voltage, gain, and speed adjustment
  - System configuration: system voltage, phase, and frequency settings, battery voltage, and generator set model
- Master switch: Run/Off-Reset/Auto
- Remote two-wire start/stop capability
- Superior electronics protection from corrosion and vibration
  - Potted electronics
  - Sealed connections
- Automatic start with programmed cranking cycle

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

Kohler Power Systems
Asia Pacific Headquarters
7 Jurong Pier Road
Singapore 619159
Phone (65) 6264-6422, Fax (65) 6264-6455

Standard Features

- Base Frame with Steel Skid
- Battery Rack and Cables
- ADC 2100 Digital Controller
- Electronic, Isochronous Governor
- Engine Shutdowns for High Engine Temperature and Low Oil Pressure
- Fuel Solenoid Valve (two valves on UL-listed units)
- Secondary Regulator
- Integral Vibration Isolation
- Oil Drain Extension
- Operation and Installation Literature

Optional Accessories

Enclosed Unit

❑ Sound Enclosure (includes silencer)
❑ Sound Upfit Kit (for weather housing)
❑ Weather Housing (includes silencer)

Open Unit

❑ Engine-Mounted Silencer
❑ Exhaust Silencer, Critical
❑ Flexible Exhaust Connector, Stainless Steel
❑ Radiator Duct Flange
❑ Rain Cap (for engine-mounted silencer)
❑ Skid End Caps (for unhoused units)

Fuel System

❑ Additional Gas Solenoid Valve (standard on UL-listed models)
❑ Flexible Fuel Lines
❑ Natural Gas Strainer

Electrical System

❑ Battery
❑ Battery Charger, Equalize/Float Type
❑ Battery Heater
❑ Remote Connection/Extension Harness (15 ft. or 25 ft.)

Engine and Alternator

❑ Air Cleaner Restriction Indicator
❑ Block Heater (recommended for ambient temperatures below 0°C (32°F)
❑ Engine Coolant (installed)
❑ Line Circuit Breaker
❑ Optional Alternators
❑ Rated Power Factor Testing
❑ Rodent Guards

Maintenance and Literature

❑ General Maintenance Literature Kit
❑ Overhaul Literature Kit
❑ Production Literature Kit
❑ Maintenance Kit (includes air filter, oil filter, and belt)

Extended Warranties

❑ Two-year Limited
❑ Five-Year Limited

Controller

❑ Relay Kit, Includes Run Relay and Common Fault Relay
❑ Remote Digital Gauge (battery charger recommended)

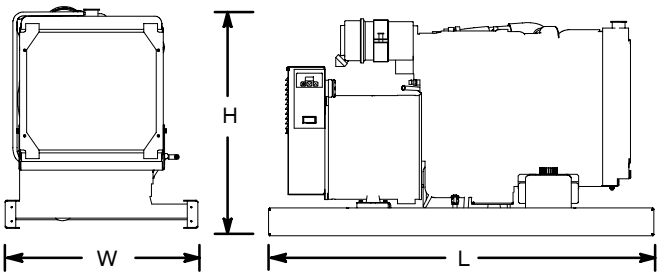
Miscellaneous Accessories

❑ _____
❑ _____
❑ _____
❑ _____
❑ _____
❑ _____
❑ _____

Dimensions and Weights

Overall Size, L x W x H, mm (in.):
Without silencer . . . . . 1400 x 685 x 788 (55.1 x 27.0 x 31.0)
With silencer . . . . . 1400 x 685 x 954 (55.1 x 27.0 x 37.5)

Weights, wet, kg (lb.):
Radiator model 318 (700)
With weather enclosure and sound kit 490 (1080)
With sound enclosure 465 (1026)



NOTE: Weights and 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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