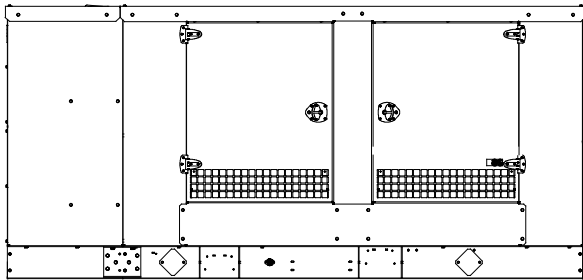




**EPA-Certified for Stationary  
Emergency Applications**

### Ratings Range

Standby:	kW kVA	60 Hz
		77-100 77-125



### 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 60 Hz generator set offers a UL 2200 listing.
- CSA approval is available.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- The generator set accepts rated load in one step.
- A one-year limited warranty covers all generator set systems and components. Two- and five-year extended limited warranties are also available.
- Alternator features:
  - The unique Fast-Response® X excitation system delivers excellent voltage response and short-circuit capability using a rare-earth, permanent magnet (PM)-excited alternator.
  - The brushless, rotating-field alternator has broadrange reconnectability.
- Other features:
  - Kohler® APM402 controller. See controller features on page 3.
  - The electronic, isochronous governor incorporates an integrated drive-by-wire throttle body actuator delivering precise frequency regulation.
- Quick-ship (QS) models with selected features and a five-year basic limited warranty are available. See your Kohler distributor for details.

### Generator Set Ratings

Alternator	Voltage	Ph	Hz	Natural Gas 130°C Rise Standby Rating		LP Gas 130°C Rise Standby Rating	
				kW/kVA	Amps	kW/kVA	Amps
4R9X	120/208	3	60	100/125	347	100/125	347
	127/220	3	60	100/125	329	100/125	329
	120/240	3	60	100/125	301	100/125	301
	120/240	1	60	77/77	321	77/77	321
	139/240	3	60	100/125	301	100/125	301
	220/380	3	60	91/114	174	91/114	174
	277/480	3	60	100/125	151	100/125	151
4R12X	120/208	3	60	100/125	347	100/125	347
	127/220	3	60	100/125	329	100/125	329
	120/240	3	60	100/125	301	100/125	301
	120/240	1	60	91/91	380	91/91	380
	139/240	3	60	100/125	301	100/125	301
	220/380	3	60	100/125	190	100/125	190
4T13X	120/240	1	60	100/100	417	100/100	417

**RATINGS:** All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor. *Standby Ratings:* 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-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory. Obtain technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. For dual fuel engines, use the natural gas ratings for both the primary and secondary fuels.

# Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Rare-Earth Permanent Magnet
Leads: quantity, type	
4RX	12, Reconnectable
4TX	4, 120/240
Voltage regulator	Solid State, Volts/Hz
Insulation:	NEMA MG1
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	±0.5%
One-step load acceptance	100% of Rating
Unbalanced load capability	100% of Rated Standby Current
Peak motor starting kVA:	(35% dip for voltages below)
480 V      4R9X (12 lead)	385 (60 Hz)
480 V      4R12X (12 lead)	448 (60 Hz)
240 V      4T13X (4 lead)	440 (60 Hz)

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- 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 alternator field.
- Self-ventilated and dripproof construction.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.
- Total harmonic distortion (THD) from no load to full load with a linear load is less than 3.2%.
- Windings are vacuum-impregnated with epoxy varnish for dependability and long life.

## Application Data

### Engine

Engine Specifications	60 Hz
Manufacturer	Kohler
Engine: model, type	KG6208THD 6.2L Turbocharged, Aftercooled
Cylinder arrangement	V-8
Displacement, L (cu. in.)	6.2 (378)
Bore and stroke, mm (in.)	101.6 x 95.25 (4.00 x 3.75)
Compression ratio	9.8:1
Rated rpm	1800
Max. power at rated rpm, kW (HP)	
NG	152 (204)
LP	131 (175)
Cylinder head material	Cast Aluminum
Piston type and material	Cast Aluminum
Crankshaft material	Forged steel
Valve (exhaust) material	Forged Steel
Governor type	Electronic
Frequency regulation, no-load to full-load	Isochronous
Frequency regulation, steady state	±1.0%
Frequency	Fixed
Air cleaner type, all models	Dry

### Exhaust

Exhaust System	60 Hz
Exhaust manifold type	Dry
Exhaust flow at rated kW, m <sup>3</sup> /min. (cfm)	24 (848)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	700 (1292)
Maximum allowable back pressure, kPa (in. Hg)	15 (4.43)
Exhaust outlet size at engine hookup, mm (in.)	88.9 (3.5)

### Engine Electrical

Engine Electrical System	60 Hz
Ignition system	Coil Pack
Battery charging alternator:	
Ground (negative/positive)	Negative
Volts (DC)	12
Ampere rating	130
Starter motor rated voltage (DC)	12
Battery, recommended cold cranking amps (CCA):	
Qty., rating for -18°C (0°F)	One, 650
Battery voltage (DC)	12

### Fuel

Fuel System	60 Hz
Fuel type	Natural Gas, LP Gas, or Dual Fuel
Fuel supply line inlet	1.5 NPT
Natural gas and LPG vapor fuel supply pressure, kPa (in. H <sub>2</sub> O)	1.74-2.74 (7-11)

Fuel Composition Limits *	Nat. Gas	LP Gas
Methane, % by volume	90 min.	—
Ethane, % by volume	4.0 max.	—
Propane, % by volume	1.0 max.	85 min.
Propene, % by volume	0.1 max.	5.0 max.
C <sub>4</sub> and higher, % by volume	0.3 max.	2.5 max.
Sulfur, ppm mass	25 max.	
Lower heating value, MJ/m <sup>3</sup> (Btu/ft <sup>3</sup> ), min.	33.2 (890)	84.2 (2260)

\* Fuels with other compositions may be acceptable. If your fuel is outside the listed specifications, contact your local distributor for further analysis and advice.

## Lubrication

Lubricating System	60 Hz
Type	Full Pressure
Oil pan capacity, L (qt.) §	5.7 (6.0)
Oil pan capacity with filter and oil cooler, L (qt.) §	9.0 (9.5)
Oil filter: quantity, type §	1, Cartridge
§ Kohler recommends the use of Kohler Genuine oil and filters.	

## Cooling

Radiator System	60 Hz
Ambient temperature, °C (°F)	45 (113)
Engine jacket water capacity, L (gal.)	7.3 (1.93)
Radiator system capacity, including engine, L (gal.)	28.4 (7.5)
Engine jacket water flow, Lpm (gpm)	126 (33.3)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	73.9 (4207)
Heat rejected to charge air cooler at rated kW, dry exhaust, kW (Btu/min.)	18 (1025)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	711 (28)
Fan, kWm (HP)	12.0 (16.1)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H <sub>2</sub> O)	0.12 (0.5)

## Operation Requirements

Air Requirements	60 Hz
Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm) †	290 (10,241)
Combustion air, m <sup>3</sup> /min. (cfm)	6.9 (244)
Heat rejected to ambient air:	
Engine, kW (Btu/min.)	30 (1708)
Alternator, kW (Btu/min.)	8 (455)
† Air density = 1.20 kg/m <sup>3</sup> (0.075 lbm/ft <sup>3</sup> )	

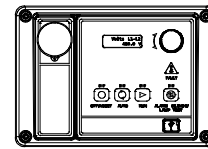
Fuel Consumption ‡	60 Hz
Natural Gas, m <sup>3</sup> /hr. (cfh) at % load	Standby Ratings
100%	41.7 (1473)
75%	34.7 (1224)
50%	26.8 (946)
25%	17.7 (625)
0%	8.3 (292)

LP Gas, m <sup>3</sup> /hr. (cfh) at % load	Standby Ratings
100%	18.8 (664)
75%	15.1 (532)
50%	11.0 (388)
25%	6.1 (216)
0%	3.4 (121)

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

LP vapor 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.

## Controllers



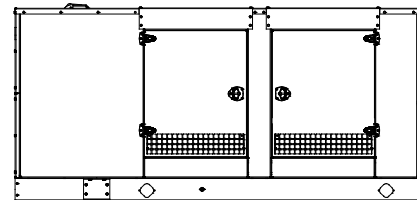
### APM402 Controller

Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.

- Digital display and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or serial configuration
- Controller supports Modbus® protocol
- Integrated hybrid voltage regulator with ±0.5% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-161 for additional controller features and accessories.

## Sound Enclosure



- Sound level (8 point logarithmic average) at 7 m (23 ft.) with full load: 69 dB(A).
- Sound level compared to competitor ratings with no load: 68 dB(A).\*
- Sound attenuating enclosure uses acoustic insulation that meets UL 94 HF1 flammability classification and repels moisture absorption.
- Vertical air inlet and outlet discharge with 90 degree bends to redirect air and reduce noise.
- Internal-mounted critical silencer and flexible exhaust connector.
- Skid-mounted, steel (standard) or aluminum (optional) construction with hinged doors.
- Fade-, scratch-, and corrosion-resistant Kohler® Cashmere Power Armor™ textured e-coat paint.
- Lockable, flush-mounted door latches.
- Certified to withstand 299 kph (186 mph) wind load rating (aluminum enclosures only).

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

## Standard Features

- Air Cleaner Restrictor Indicator
- Alternator Protection
- Battery Rack and Cables
- Electronic, Isochronous Governor
- Gas Fuel System (includes fuel mixer, electronic secondary gas regulator, gas solenoid valve, and flexible fuel line between the engine and the skid-mounted fuel system components)
- Flexible Fuel Line (for fuel supply connection)
- Integral Vibration Isolation
- Local Emergency Stop Switch
- Oil Drain Extension
- Operation and Installation Literature
- Steel Sound Enclosure
- Three-Way Catalyst

## Available Options

### Approvals and Listings

- CSA Approval
- UL 2200 Listing

### Enclosure

- Aluminum Sound Enclosure

### Fuel System

- Dual Fuel NG/LPG (automatic changeover)
- Fuel Filter Kit
- Secondary Gas Solenoid Valve (NFPA Fuel System)

### Controller

- Two Input/Five Output Module
- Four Input/Fifteen Output Module
- Remote Emergency Stop
- Run Relay
- Manual Speed Adjust
- Lockable Emergency Stop
- Remote Annunciator panel

### Cooling System

- Block Heater, 1500 W, 110- 120 V
  - Block Heater, 1500 W, 190- 240 V
- Recommended for ambient temperatures below 10°C (50°F)

### Electrical System

- Battery
- Battery Charger
- Battery Charger Temperature Compensation
- Battery Heater
- Alternator Strip Heater
- Line Circuit Breaker (NEMA1 enclosure)
- Line Circuit Breaker with Shunt Trip (NEMA1 enclosure)

### Miscellaneous

- Certified Test Report
- Engine Fluids (oil and coolant) Added
- Rated Power Factor Testing
- Rodent Guards

### Literature

- General Maintenance
- Overhaul
- Production

### Warranty

- 2-Year Basic Limited Warranty
- 5-Year Basic Limited Warranty
- 5-Year Comprehensive Limited Warranty

### Other Options

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

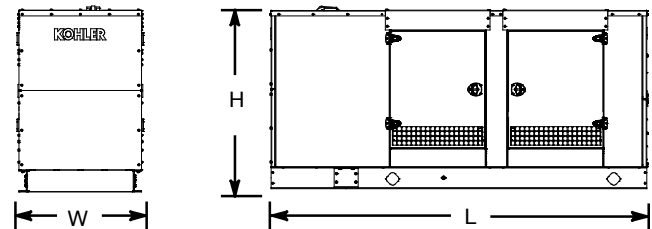
## Dimensions and Weights

Overall Size, L x W x H, mm (in.) :

3525 x 1154 x 1665 (138.8 x 45.4 x 65.5)

Weight, wet, kg (lb.):

With steel sound enclosure                      1616 (3562)  
 With aluminum sound enclosure              1515 (3340)



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

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