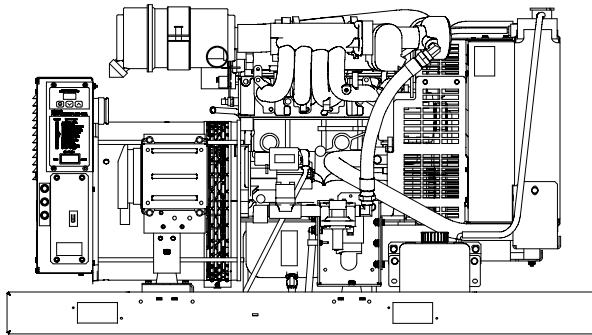




**Ratings Range**

		60 Hz	50 Hz
Standby:	kW	19.0-30.0	19.6-25.5
	kVA	23.7-33.6	19.6-26.3



**Generator Set Ratings**

Alternator	Voltage	Ph	Hz	Standby Ratings *			
				Natural Gas		LP Gas	
				kW/kVA	Amps	kW/kVA	Amps
2F5	120/240	1	60	24.0/24.0	100	24.0/24.0	100
	110/220	1	50	19.6/19.6	89	19.6/19.6	89
2G5	120/208	3	60	19.0/23.7	66	19.0/23.7	66
	120/240	3	60	19.0/23.7	57	19.0/23.7	57
	127/220	3	60	19.0/23.7	62	19.0/23.7	62
	139/240	3	60	20.0/24.9	60	20.0/24.9	60
	277/480	3	60	20.0/24.9	30	20.0/24.9	30
2F7	120/240	1	60	27.0/27.0	112	30.0/30.0	125
	110/220	1	50	23.3/23.3	106	25.5/25.5	116
	120/208	3	60	26.0/32.4	90	26.0/32.4	90
	120/240	3	60	26.0/32.4	78	26.0/32.4	78
	127/220	3	60	26.0/32.4	85	26.0/32.4	85
	139/240	3	60	27.0/33.6	81	27.0/33.6	81
2G7	277/480	3	60	27.0/33.6	41	27.0/33.6	41
	110/190	3	50	21.1/26.3	80	21.1/26.3	80
	110/220	3	50	21.0/26.3	69	21.0/26.3	69
	115/200	3	50	20.5/25.6	74	20.5/25.6	74
	120/208	3	50	20.2/25.2	70	20.2/25.2	70
	220/380	3	50	21.1/26.3	40	21.1/26.3	40
	230/400	3	50	20.5/25.6	37	20.5/25.6	37
240/416	3	50	20.2/25.2	35	20.2/25.2	35	

**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

\* 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 information 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. NOTE: Order separate generator set specs for 50 or 60 Hz as this model cannot change frequency. 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	2-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)
120/240 V, 1-ph	2F5 (4 lead) 33 (60 Hz)
110/220 V, 1-ph	2F5 (4 lead) 26 (50 Hz)
480 or 240 V, 3-ph wye	2G5 (12 lead) 54 (60 Hz)
120/240 V, 1-ph	2F7 (4 lead) 42 (60 Hz)
110/220 V, 1-ph	2F7 (4 lead) 34 (50 Hz)
480 or 240 V, 3-ph wye	2G7 (12 lead) 69 (60 Hz)
230/400 V, 3-ph wye	2G7 (12 lead) 50 (50 Hz)

- 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	50 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.)	586 (1925)	488 (1603)
Main bearings: quantity, type	5, Replaceable Inserts	
Rated rpm	3600	3000
Max. power at rated rpm, kWm (BHP)	37.2 (50)	33.5 (45)
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	50 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 <sub>2</sub> O)	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 <sub>4</sub> and higher, % by volume	0.3 max.	2.5 max.
Sulfur, ppm mass (maximum)	25 max.	
Lower heating value, kJ/m <sup>3</sup> (Btu/ft <sup>3</sup> ), 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	50 Hz
Exhaust flow at rated kW, m <sup>3</sup> /min. (cfm)	8.35 (295)	6.95 (245)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	760 (1400)	
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	50 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	50 Hz
Ambient temperature °C (°F) †	50 (122)	
Engine jacket water capacity, L (gal.)	3.3 (0.9)	
Engine jacket water flow, Lpm (gpm)	64.4 (17.0)	50.0 (13.2)
Radiator system capacity, including engine, L (gal.)	11.5 (3.0)	
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	31.5 (1791)	24.5 (1393)
Water pump type	Centrifugal	
Fan diameter, including blades, mm (in.)	406 (16.0)	
Fan, kWm (HP)	1.8 (2.5)	
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H <sub>2</sub> O)	0.13 (0.5)	

† Enclosures with enclosed silencers reduce ambient temperature capability by 5°C (9°F).

## Operation Requirements

Air Requirements	60 Hz	50 Hz
Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm)‡	142 (5000)	113 (4000)
Combustion air, m <sup>3</sup> /min. (cfm)	1.8 (65)	1.5 (54)
Heat rejected to ambient air:		
Engine, kW (Btu/min.)	73.2 (4167)	58.5 (3330)
Alternator, kW (Btu/min.)	6.6 (376)	5.3 (302)

‡ Air density = 1.20 kg/m<sup>3</sup> or 0.075 lbm/ft<sup>3</sup>

Fuel Consumption	60 Hz	50 Hz
<b>Natural Gas, m<sup>3</sup>/hr. (cfh) at % load</b>		
100%	12.7 (450)	9.9 (350)
75%	10.6 (375)	8.5 (300)
50%	8.5 (300)	6.4 (225)
25%	6.4 (225)	5.0 (175)

<b>LP Gas, m<sup>3</sup>/hr. (cfh) at % load</b>		
100%	5.1 (180)	4.0 (140)
75%	4.2 (150)	3.3 (115)
50%	3.4 (120)	2.4 (85)
25%	2.5 (90)	1.8 (65)

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.

Nominal fuel rating:

Natural gas: 37 MJ/m<sup>3</sup> (1000 Btu/ft.<sup>3</sup>)

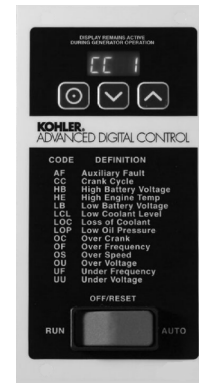
LP vapor: 93 MJ/m<sup>3</sup> (2500 Btu/ft.<sup>3</sup>)

## Sound Data

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

Enclosure Type	Sound Level, dBA
Weather enclosure	80
Weather enclosure w/sound upfit kit	74
Sound enclosure	68

# 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

## 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

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

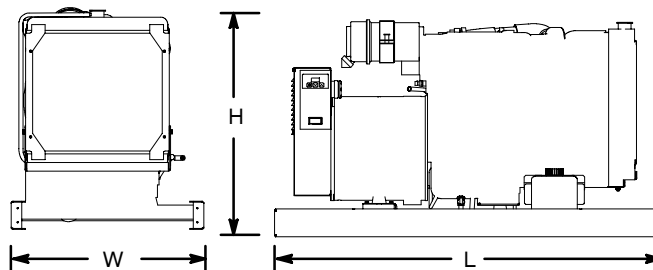
## Dimensions and Weights

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)

Weight, wet, kg (lb.):

Radiator model	327 (720)
With weather enclosure and sound kit	503 (1109)
With sound enclosure	475 (1046)



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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