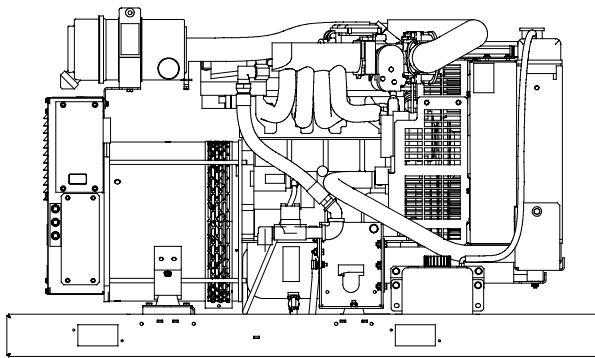




**Ratings Range**

		60 Hz	50 Hz
Standby:	kW	17.1-30.0	19.6-25.5
	kVA	21.3-33.6	19.6-26.3



**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.
- UL 2200 listing is available.
- The 60 Hz generator set engine is certified by the Environmental Protection Agency (EPA) to conform to the New Source Performance Standard (NSPS) for stationary spark-ignited emissions.
- 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 gas 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**

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
2G7	139/240	3	60	27.0/33.6	81	27.0/33.6	81
	277/480	3	60	27.0/33.6	40	27.0/33.6	40
	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	20.2/25.5	70	20.2/25.5	70
	220/380	3	50	21.0/26.3	40	21.0/26.3	40
	230/400	3	50	20.5/25.6	37	20.5/25.6	37
240/416	3	50	20.2/25.5	35	20.2/25.5	35	

\* 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:* 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. **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%
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) 41 (60 Hz)
110/220 V, 1-ph	2F7 (4 lead) 28.5 (50 Hz)
480 or 240 V, 3-ph wye	2G7 (12 lead) 75 (60 Hz)
230/400 V, 3-ph	2G7 (12 lead) 62.5 (50 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 generator field.
- Self-ventilated and drip-proof 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.
- Digital voltage regulator with ±1.5% no-load to full-load regulation.

## 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)	38.8 (52)	35.1 (47.1)
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	
Ignition System	Electronic
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):	525
Battery voltage (DC)	12

### Fuel

Fuel System		
Fuel type	LP Gas or Natural Gas	
Fuel supply inlet	3/4 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 manifold type	Dry	
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	
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.)	10.5 (600)	8.8 (500)
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>

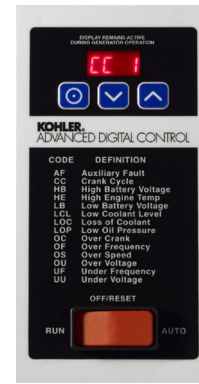
Fuel Consumption	60 Hz	50 Hz
<b>Natural Gas, m<sup>3</sup>/hr. (cfh) at % load</b>		
100%	12.7 (450)	9.9 (350)
75%	10.6 (375)	8.5 (300)
50%	8.5 (300)	6.4 (225)
25%	6.4 (225)	5.0 (175)

LP Gas, m <sup>3</sup> /hr. (cfh) at % load	60 Hz	50 Hz
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)

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

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
- Digital voltage regulation: ± 1.5% RMS no-load to full-load
- Automatic start with programmed cranking cycle

## Standard Features

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

## Optional Accessories

### Communication Accessories

- OnCue™ Home Generator Management System

### Enclosed Unit

- High Wind Kit for Sound Enclosure
- Sound Enclosure (includes silencer)
- Sound Upfit Kit (for weather enclosure)
- Weather Enclosure (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)
- 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
- Oil Makeup Kit
- 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)

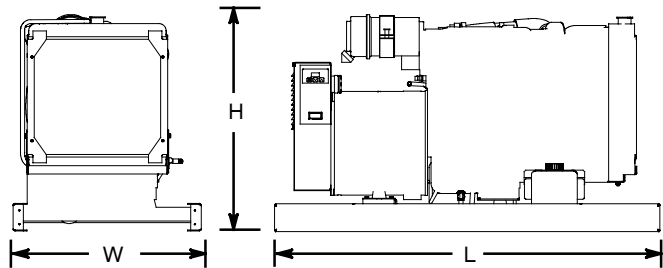
### Miscellaneous Accessories

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

## Dimensions and Weights

Overall Size, L x W x H, mm (in.):	
Without silencer .....	1400 x 725 x 820 (55.1 x 28.5 x 32.3)
With silencer .....	1400 x 725 x 927 (55.1 x 28.5 x 36.5)

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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