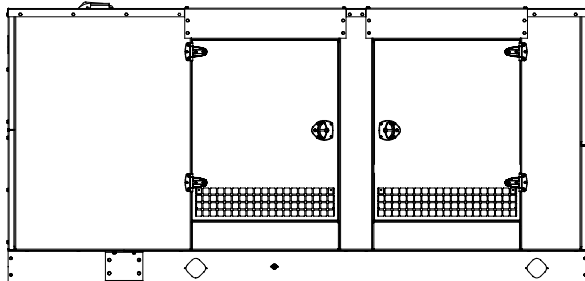




Ratings Range

Standby:	kW	60 Hz	50 Hz
	kVA	95-125 95-156	84-100 84-125



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.
- UL 2200 listing is available. (60 Hz only)
- The generator set accepts rated load in one step.
- 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.

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
4S11	120/208	3	60	125/156	434	105/131	364
	127/220	3	60	125/156	410	105/131	344
	120/240	3	60	125/156	376	105/131	316
	120/240	1	60	95/95	396	95/95	396
	139/240	3	60	125/156	376	105/131	316
	220/380	3	60	120/150	228	105/131	199
	277/480	3	60	125/156	188	105/131	158
	110/190	3	50	100/125	380	92/115	349
	115/200	3	50	100/125	361	92/115	332
	120/208	3	50	100/125	347	92/115	319
	110/220	1	50	84/84	382	84/84	382
	110/220	3	50	100/125	328	92/115	302
	220/380	3	50	100/125	190	92/115	175
	230/400	3	50	100/125	180	92/115	166
240/416	3	50	100/125	173	92/115	160	
4S13	120/208	3	60	125/156	434	105/131	364
	127/220	3	60	125/156	410	105/131	344
	120/240	3	60	125/156	376	105/131	316
	120/240	1	60	100/100	417	100/100	417
	139/240	3	60	125/156	376	105/131	316
	220/380	3	60	125/156	237	105/131	199
	277/480	3	60	125/156	188	105/131	158
	110/190	3	50	100/125	380	92/115	349
	115/200	3	50	100/125	361	92/115	332
	120/208	3	50	100/125	347	92/115	319
	110/220	1	50	90/90	409	88/88	400
	110/220	3	50	100/125	328	92/115	302
	220/380	3	50	100/125	190	92/115	175
	230/400	3	50	100/125	180	92/115	166
240/416	3	50	100/125	173	92/115	160	
4V11	120/240	1	60	110/110	458	100/100	417
	110/220	1	50	92/92	418	86/86	391

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. For limited running time and base load ratings, consult the factory. Obtain the technical information bulletin (TIB-101) on ratings guidelines for the 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 1.3% per 100 m (328 ft.) elevation above 200 m (656 ft.) up to a maximum elevation of 3000 m (9842 ft.). *Temperature:* Derate 2.0% per 10° C (18° F) temperature above 25° C (77° F) up to 50° C (122° F). 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, Permanent-Magnet
Leads: quantity, type	
4V11	4, 110-120/220-240
4S11, 4S13	12, Reconnectable
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	
Decision-Maker 3000 controller	3-Phase Sensing, ±0.5%
Decision-Maker 550 controller (with 0.5% drift due to temp variation)	3-Phase Sensing, ±0.25%
Unbalanced load capability	100% of Rated Standby Current
One-step load acceptance	100% of Rating
Peak motor starting kVA:	(35% dip for voltages below)
480 V, 380 V 4S11 (12 lead)	460 (60 Hz), 345 (50 Hz)
480 V, 380 V 4S13 (12 lead)	515 (60 Hz), 370 (50 Hz)
240 V, 220 V 4V11 (4 lead)	350 (60 Hz), 275 (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 alternator 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.
- Fast-Response™ II brushless alternator with brushless exciter for excellent load response.

Application Data

Engine

Engine Specifications	60 Hz	50 Hz
Manufacturer	General Motors	
Engine: model, type	Industrial Powertrain, Vortec 8.1 L, 4-Cycle, Turbocharged	
Cylinder arrangement	V-8	
Displacement, L (cu. in.)	8.1 (496)	
Bore and stroke, mm (in.)	108 x 111 (4.25 x 4.37)	
Compression ratio	9.1:1	
Piston speed, m/min. (ft./min.)	399 (1311)	332 (1092)
Main bearings: quantity, type	Alum. Lead Silicon Alloy	
Rated rpm	1800	1500
Max. power at rated rpm, kW (HP)	146 (195)	118 (158)
Cylinder head material	Cast Iron	
Piston type and material	Strutless Flat Top, Hypereutectic Cast Alum.	
Crankshaft material	Cast Nodular Undercut Rolled Fillet	
Valve (exhaust) material	Int.-A193 Exh. Inconel	
Governor type	Electronic	
Frequency regulation, no-load to full-load	Isochronous	
Frequency regulation, steady state	±0.5%	
Frequency	Fixed	
Air cleaner type, all models	Dry	

Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Ignition system	Individual Coil Near Plug Ignition	
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):		
Qty., rating for -18°C (0°F)	One, 630	
Battery voltage (DC)	12	

Fuel

Fuel System	60 Hz	50 Hz
Fuel type	LP Gas, Natural Gas, or Dual Fuel	
Fuel supply line inlet	1.5 NPTF	
Natural gas/LPG fuel supply pressure, measured at the generator set fuel inlet		

Exhaust

Exhaust System	60 Hz	50 Hz
Exhaust manifold type	Dry	
Exhaust flow at rated kW, m ³ /min. (cfm)	26.1 (920)	18.7 (660)
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.)	See ADV drawing	

Application Data

Lubrication

Lubricating System	60 Hz	50Hz
Type	Full Pressure	
Oil pan capacity, L (qt.)	8.0 (8.5)	

Controller

Engine
Radiator
engine,
Engine jacket
Heat rejected to
kW, dry exhaust
Heat rejected to en
kW (Btu/min.)
Water pump type
Fan diameter, including bl
Fan, kWm (HP)
Max. restriction of cooling air, in
discharge side of radiator, kPa (in

Operation Requirements

Air Requirements

Radiator-cooled cooling air, m ³ /min. (scfm)†	306 (1080)	
Combustion air, m ³ /min. (cfm)	8.8 (312)	
Heat rejected to ambient air:		
Engine, kW (Btu/min.)	72.0 (4100)	90.0 (5100)
Alternator, kW (Btu/min.)	13.7 (780)	9.0 (560)

† Air density = 1.20 kg/m³ (0.075 lbm/ft³)

Fuel Consumption‡

Natural Gas, m ³ /hr. (cfh) at % load	Standby Rating	
	60 Hz	50 Hz
100%	46.8 (1667)	39.6 (1400)
75%	38.9 (1372)	31.3 (1105)
50%	27.9 (997)	22.8 (806)
25%	18.4 (662)	15.1 (535)
0%	10.0 (359)	10.0 (310)

LP Gas, m³/hr. (cfh) at % load

LP Gas, m ³ /hr. (cfh) at % load	Standby Rating	
	60 Hz	50 Hz
100%	13.5 (582)	14.4 (510)
75%	10.3 (469)	11.8 (418)
50%	10.0 (354)	8.4 (298)
25%	6.4 (226)	5.8 (205)
0%	3.7 (130)	3.1 (108)

‡ Fuel consumption is based on 15 Btu/standard cu. ft. natural gas.

LP vapor conversion factor:
8.58 ft.³ = 1 gal.
0.535 m³ = 1 gal.
36.39 ft.³ = 1 gal.

- Sound level at 7 ft. (2.1 m) is 71 dB(A)
- Sound attenuated by 25 mm (1 in.) of acoustic insulation, acoustic inlet hoods, and acoustic-lined air discharge ducts.
- Acoustic insulation that meets Class 1 H-F1 flammability classification and repels moisture absorption.
- Internally mounted critical silencer and flexible exhaust connection.
- Skid-mounted steel construction with hinged doors.
- Fade-, scratch- and corrosion-resistant powder® cream beige powder-baked finish.
- Lockable, flush-mounted door latches.
- Vertical air inlet and inlet hoods with 90° deflector to redirect air and reduce noise.
- High wind bracing, 241 mm (9.5 in.) x 50 mm (2 in.)

Approvals and Listings

- CSA Approval
- UL 2200 Listing (60 Hz only)

Fuel System

- Dual Fuel NG/LPG (automatic changeover)
- Flexible Fuel Line
(required when the generator set skid is spring mounted)
- Gas Filter
- Additional Gas Solenoid Valve

Controller

- Common Fault Relay
- Communication Products and PC Software (550 controller only)
- Customer Connection (550 controller only)
- Dry Contact (isolated alarm) (550 controller only)
- Input/Output Module (3000 controller only)
- Remote Annunciator Panel
- Remote Audiovisual Alarm Panel (550 controller only)
- Remote Emergency Stop
- Run Relay

Cooling System

- Block Heater
[recommended for ambient temperatures below 10°C (50°F)]

Electrical System

- Alternator Strip Heater
- Battery
- Battery Charger, Equalize/Float Type
- Battery Heater
- Line Circuit Breaker (NEMA1 enclosure)
- Line Circuit Breaker with Shunt Trip (NEMA1 enclosure)

Miscellaneous

- Air Cleaner Restrictor Indicator
- Engine Fluids (oil and coolant) Added
- Rated Power Factor Testing
- Rodent Guards

Literature

- General Maintenance
- Overhaul
- Production

Warranty

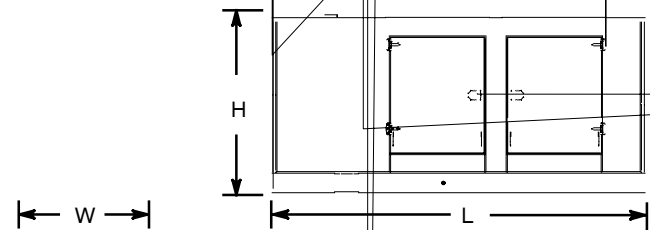
- 2-Year Basic
- 5-Year Basic
- 5-Year Comprehensive

Other Options

-
-
-
-
-
-
-
-

Dimensions and Weights

Overall Size, L x W x H, mm (in.) : 3500 x 1156 x 1697 (137.8 x 45.5 x 66.8)
 Weight (w/enclosure), wet, kg (lb.) 1836 (4048)



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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