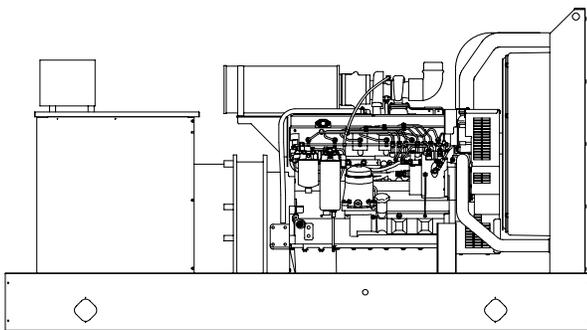




Ratings Range

		50 Hz	
Standby:	kW	224-236	
	kVA	280-295	
Prime:	kW	200-204	
	kVA	250-255	



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.
- The generator set complies with ISO 8528-5 requirements for transient performance.
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are also available.
- Alternator features:
 - The Fast-Response™ III wound field (WF) design alternator provides excellent voltage response and short-circuit capability using an auxiliary power brushless exciter.
 - The unique Fast-Response™ II excitation system delivers excellent voltage response and short circuit capability using a permanent magnet (PM)-excited alternator.
 - The brushless, rotating-field alternator has broadrange reconnectability.
- Other features:
 - Controllers are available for all applications. See controller features inside.
 - The low coolant level shutdown prevents overheating (standard on radiator models only).
 - Integral vibration isolation eliminates the need for under-unit vibration spring isolators.

Generator Set Ratings

Alternator	Voltage	Ph	Hz	130°C Rise Standby Rating		105°C Rise Prime Rating	
				kW/kVA	Amps	kW/kVA	Amps
4UA10W/ 4UA10	110/190	3	50	224/280	851	200/250	760
	115/200	3	50	224/280	808	200/250	722
	120/208	3	50	224/280	777	200/250	694
	110/220	3	50	224/280	735	200/250	656
	220/380	3	50	224/280	425	200/250	380
	230/400	3	50	224/280	404	200/250	361
	240/416	3	50	224/280	389	200/250	347
4UA13W/ 4UA13	110/190	3	50	236/295	896	204/255	775
	115/200	3	50	236/295	852	204/255	736
	120/208	3	50	236/295	819	204/255	708
	110/220	3	50	236/295	774	204/255	669
	220/380	3	50	236/295	448	204/255	387
	230/400	3	50	236/295	426	204/255	368
	240/416	3	50	236/295	409	204/255	354

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. *Prime Power Ratings:* Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power 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 DERATION:** *Altitude:* Derate 0.5% per 100 m (328 ft.) elevation above 1000 m (3300 ft.). *Temperature:* Derate 1.0% per 10°C (18°F) temperature above 25°C (77°F).

Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	
Wound field (WF)	Wound Exciter Field with Separate Excitation Power Winding
Permanent magnet (PM)	Brushless, Permanent-Magnet
Leads: quantity, type	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	
Wound field (WF) alternator	±0.25% Average
Permanent magnet (PM) alternator	±2% Average
550 controller (with 0.5% drift due to temperature 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)
380 V 4UA10W/4UA10 (12 lead)	540
380 V 4UA13W/4UA13 (12 lead)	600

- 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 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.
- Fast-Response™ III wound field (WF) brushless alternator with auxiliary power brushless exciter for excellent load response.
- Fast-Response™ II brushless alternator with brushless exciter for excellent load response.

Application Data

Engine

Engine Specifications	
Manufacturer	John Deere
Engine model	6081HF001
Engine type	4-Cycle, Turbocharged
Cylinder arrangement	6 Inline
Displacement, L (cu. in.)	8.1 (496)
Bore and stroke, mm (in.)	116 x 129 (4.57 x 5.08)
Compression ratio	15.7:1
Piston speed, m/min. (ft./min.)	457 (1500)
Main bearings: quantity, type	7, Replaceable Insert
Rated rpm	1500
Max. power at rated rpm, kWm (BHP)	268 (359)
Cylinder head material	Cast Iron
Crankshaft material	Forged Steel
Valve material:	
Intake	Chromium-Silicon Steel
Exhaust	Stainless Steel
Governor: type, make/model	Mechanical
Frequency regulation, no-load to full-load	5%
Frequency regulation, steady state	±0.33% (mech. gov.) ±0.25% (isoch. gov.)
Frequency	Fixed
Air cleaner type, all models	Dry

Exhaust

Exhaust System	
Exhaust manifold type	Dry
Exhaust flow at rated kW, m ³ /min. (cfm)	47.0 (1660)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	699 (1290)
Maximum allowable back pressure, kPa (in. Hg)	7.5 (2.2)
Exhaust outlet size at engine hookup, mm (in.)	98 (3.86)

Engine Electrical

Engine Electrical System	
Battery charging alternator:	24 Volt
Ground (negative/positive)	Negative
Volts (DC)	24
Ampere rating	60
Starter motor rated voltage (DC)	24
Battery, recommended cold cranking amps (CCA):	
Quantity, CCA rating each	Two, 950
Battery voltage (DC)	12

Application Data

Fuel

Fuel System	
Fuel supply line, min. ID, mm (in.)	11.0 (0.44)
Fuel return line, min. ID, mm (in.)	6.0 (0.25)
Max. lift, fuel pump: type, m (ft.)	Mechanical, 3 (10)
Max. fuel flow, Lph (gph)	204.8 (54.1)
Fuel prime pump	Manual
Fuel filter	8 Microns @ 98% Efficiency
Water Separator	Yes
Recommended fuel	#2 Diesel

Lubrication

Lubricating System	
Type	Full Pressure
Oil pan capacity, L (qt.)	31.2 (33)
Oil pan capacity with filter, L (qt.)	32.2 (34)
Oil filter: quantity, type	1, Cartridge
Oil cooler	Water-Cooled

Cooling

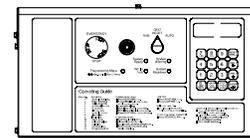
Radiator System	
Ambient temperature, °C (°F)	50 (122)
Engine jacket water capacity, L (gal.)	14.2 (3.75)
Radiator system capacity, including engine, L (gal.)	34.1 (9.0)
Engine jacket water flow, Lpm (gpm)	268 (71)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	90.5 (5150)
Heat rejected to charge cooler at rated kW, dry exhaust, kW (Btu/min.)	49.8 (2830)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	851 (33.5)
Fan, kWm (HP)	8 (10.7)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H ₂ O)	0.125 (0.5)

Operation Requirements

Air Requirements	
Radiator-cooled cooling air, m ³ /min. (scfm)‡	425 (15000)
Combustion air, m ³ /min. (cfm)	17.3 (610)
Heat rejected to ambient air:	
Engine, kW (Btu/min.)	51.5 (2930)
Alternator, kW (Btu/min.)	20.6 (1170)
‡ Air density = 1.20 kg/m ³ (0.075 lbm/ft ³)	

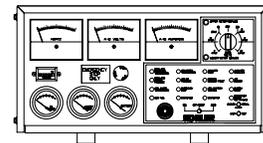
Fuel Consumption	50 Hz
Diesel, Lph (gph) at % load	Standby Rating
100%	63.6 (16.8)
75%	46.6 (12.3)
50%	31.0 (8.2)
25%	17.0 (4.5)
Diesel, Lph (gph) at % load	Prime Rating
100%	53.8 (14.2)
75%	40.5 (10.7)
50%	28.8 (7.6)
25%	16.7 (4.4)

Controllers



Decision-Maker™ 550 Controller

Audiovisual annunciation with NFPA 110 Level 1 capability. Programmable microprocessor logic and digital display features. Alternator safeguard circuit protection. 12- or 24-volt engine electrical system capability. Remote start, remote annunciation, and remote communication options. Refer to G6-46 for additional controller features and accessories.



Decision-Maker™ 3+, 16-Light Controller

Audiovisual annunciation with NFPA 110 Level 1 capability. Microprocessor logic, AC meters, and engine gauge features. 12- or 24-volt engine electrical system capability. Remote start, prime power, and remote annunciation options. Refer to G6-30 for additional controller features and accessories.

Additional Standard Features

- Alternator Protection (standard with 550 controller)
- Battery Rack and Cables
- Integral Vibration Isolation
- Oil Drain Extension
- Operation and Installation Literature

Available Accessories

Enclosed Unit

- Weather Housing (with roof-mounted critical silencer)

Open Unit

- Exhaust Silencer, Critical (kit: PA-354809)
- Exhaust Silencer, Hospital (kit: PA-365349)
- Flexible Exhaust Connector, Stainless Steel

Cooling System

- Block Heater (recommended for ambient temperatures below 0°C [32°F])
- Radiator Duct Flange

Fuel System

- Flexible Fuel Lines
- Fuel Pressure Gauge

Electrical System

- Battery
- Battery Charger, Equalize/Float Type
- Battery Heater

Engine and Alternator

- Alternator, Wound Field (WF)
- Alternator, Permanent Magnet (PM)
- Air Cleaner, Heavy Duty
- Air Cleaner Restriction Indicator
- Alternator Strip Heater
- Bus Bar Kits
- Closed Crankcase Canister
- Current Transformer Kit
- Electronic Isochronous Governor ($\pm 0.25\%$ freq. reg. steady state)
- Line Circuit Breaker (NEMA type 1 enclosure)
- Line Circuit Breaker with Shunt Trip (NEMA type 1 enclosure)
- Rated Power Factor Testing
- Rodent Guards
- Safeguard Breaker (not available with 550 controller)
- Skid End Caps
- Voltage Regulation, 1%
- Voltage Regulator Sensing, 3-Phase

Paralleling System

- Reactive Droop Compensator
- Remote Speed Adjust Control/Electronic Governor
- Voltage Adjust Control
- Voltage Regulator Relocation Kit

Maintenance

- General Maintenance Literature Kit
- Maintenance Kit (includes standard air, oil, and fuel filters)
- NFPA 110 Literature
- Overhaul Literature Kit
- Production Literature Kit

Controller

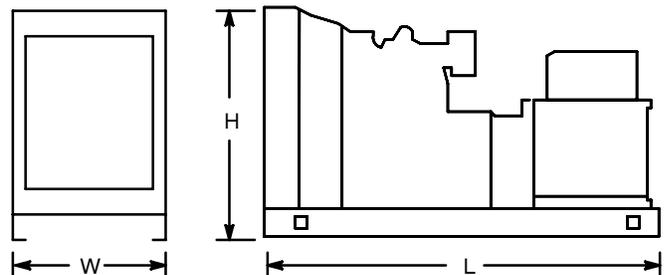
- Common Failure Relay Kit
- Communication Products and PC Software (550 controller only)
- Customer Connection Kit
- Dry Contact Kit (isolated alarm)
- Engine Prealarm Sender Kit
- Prime Power Switch (550 controller only)
- Remote Annunciator Panel
- Remote Audiovisual Alarm Panel
- Remote Emergency Stop Kit
- Remote Mounting Cable
- Run Relay Kit

Miscellaneous Accessories

- _____
- _____
- _____
- _____
- _____
- _____

Dimensions and Weights

Overall Size, L x W x H, mm (in.): 3100 x 1250 x 1701
 (122.04 x 49.21 x 66.97)
 Weight (radiator model), wet, kg (lb.): 2189 (4825)



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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