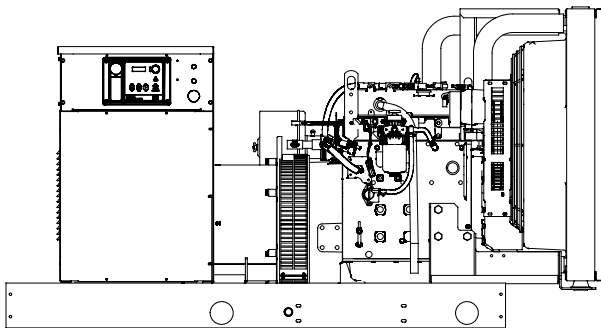




**Ratings Range**

		<b>60 Hz</b>
<b>Standby:</b>	<b>kW</b>	37-50
	<b>kVA</b>	37-63
<b>Prime:</b>	<b>kW</b>	33-45
	<b>kVA</b>	33-56



**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.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- The 60 Hz generator set engine is certified by the Environmental Protection Agency (EPA) to conform to Tier 3 nonroad emissions regulations.
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are also available.
- Alternator features:
  - 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
4P7	120/208	3	60	47/59	163	43/54	149
	127/220	3	60	49/61	161	45/56	148
	120/240	3	60	47/59	141	43/54	129
	120/240	1	60	37/37	154	33/33	138
	139/240	3	60	50/63	150	45/56	135
	220/380	3	60	40/50	76	36/45	68
	277/480	3	60	50/63	75	45/56	68
	347/600	3	60	40/50	48	36/45	43
4P8	120/208	3	60	50/63	173	45/56	156
	127/220	3	60	50/63	164	45/56	148
	120/240	3	60	50/63	150	45/56	135
	120/240	1	60	47/47	196	43/43	179
	139/240	3	60	50/63	150	45/56	135
	220/380	3	60	50/63	95	45/56	85
	277/480	3	60	50/63	75	45/56	68
4Q10	120/240	1	60	50/50	208	45/45	188

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 2300 m (7546 ft.). *Temperature:* Derate 2.0% per 10°C (18°F) temperature above 25°C (77°F).

# Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Permanent-Magnet
Leads: quantity, type	
4Q10	4, 110-120/220-240
4P7, 4P8	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 550 controller (with 0.5% drift due to temp. variation)	3-Phase Sensing, ±0.25%
Decision-Maker 3000 controller	3-Phase Sensing, ±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 4P7 (12 lead)	194
480 V 4P8 (12 lead)	212
240 V 4Q10 (4 lead)	155

- 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	
Manufacturer	John Deere
Engine model	4024HF285B
Engine type	4-Cycle, Turbocharged
Cylinder arrangement	4 Inline
Displacement, L (cu. in.)	2.4 (149)
Bore and stroke, mm (in.)	86 x 105 (3.39 x 4.13)
Compression ratio	18.2:1
Piston speed, m/min. (ft./min.)	375 (1230)
Main bearings: quantity, type	5, Replaceable Insert
Rated rpm	1800
Max. power at rated rpm, kWm (BHP)	60 (80)
Cylinder head material	Cast Iron
Crankshaft material	Ductile Iron
Valve material:	
Intake	Chromium-Silicon Steel
Exhaust	Stainless Steel
Governor: type, make/model	JDEC Electronic, Level 18, EUP
Frequency regulation, no-load to full-load	Isochronous
Frequency regulation, steady state	±0.25%
Frequency	Fixed
Air cleaner type, all models	Dry

### Exhaust

Exhaust System	
Exhaust manifold type	Dry
Exhaust flow at rated kW, m <sup>3</sup> /min. (cfm)	12.0 (423)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	574 (1066)
Maximum allowable back pressure, kPa (in. Hg)	7.5 (2.2)
Exhaust outlet size at engine hookup, mm (in.)	63.5 (2.5)

### Engine Electrical

Engine Electrical System		
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):		
Quantity, CCA rating		One, 640
Battery voltage (DC)		12

### 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, engine-driven fuel pump, m (ft.)	3.0 (10.0)
Max. fuel flow, Lph (gph)	82 (21.7)
Fuel prime pump	Manual
Fuel filter	
Secondary	5 Microns @ 98% Efficiency
Water Separator	Yes
Recommended fuel	#2 Diesel

### Lubrication

Lubricating System	
Type	Full Pressure
Oil pan capacity, L (qt.)	7.3 (7.7)
Oil pan capacity with filter, L (qt.)	8.2 (8.7)
Oil filter: quantity, type	1, Cartridge
Oil cooler	Water-Cooled

## Application Data

### Cooling

#### Radiator System

Ambient temperature, °C (°F)*	50 (122)
Engine jacket water capacity, L (gal.)	2.6 (0.7)
Radiator system capacity, including engine, L (gal.)	10.6 (2.8)
Engine jacket water flow, Lpm (gpm)	98 (26)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	35.7 (2030)
Heat rejected to air charge cooler at rated kW, dry exhaust, kW (Btu/min.)	10.9 (621)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	597 (23.5)
Fan, kWm (HP)	2.9 (3.9)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H <sub>2</sub> O)	0.125 (0.5)

\* Enclosure reduces ambient temperature capability by 5°C (9°F).

### Operation Requirements

#### Air Requirements

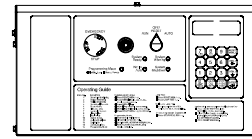
Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm)‡	96 (3400)
Combustion air, m <sup>3</sup> /min. (cfm)	4.3 (152)
Heat rejected to ambient air:	
Engine, kW (Btu/min.)	14.0 (747)
Alternator, kW (Btu/min.)	7.6 (435)

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

#### Fuel Consumption

Diesel, Lph (gph) at % load	Standby Rating	
100%	16.2	(4.3)
75%	12.1	(3.2)
50%	8.5	(2.2)
25%	5.0	(1.3)
Diesel, Lph (gph) at % load	Prime Rating	
100%	13.7	(3.6)
75%	10.8	(2.9)
50%	7.6	(2.0)
25%	4.5	(1.2)

## Controllers

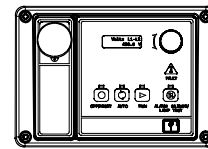


#### Decision-Maker® 550 Controller

Provides advanced control, system monitoring, and system diagnostics with remote monitoring capabilities.

- Digital display and keypad provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a personal computer via network or modem configuration
- Controller supports Modbus® protocol
- Integrated voltage regulator with ±0.25% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-46 for additional controller features and accessories.



#### Decision-Maker® 3000 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
- Scrolling display shows critical data at a glance
- Integrated hybrid voltage regulator with ±0.5% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-100 for additional controller features and accessories.

## Additional Standard Features

- Alternator Protection
- Battery Rack and Cables
- Oil Drain and Coolant Drain w/Hose Barb
- Oil Drain Extension (with narrow skid and enclosure models only)
- Operation and Installation Literature
- Radiator Drain Extension (with enclosure only)

## Available Options

### Approvals and Listings

- CSA Approval
- IBC Seismic Certification
- UL2200 Listing

### Enclosed Unit

- Sound Enclosure (with enclosed critical silencer)
- Weather Enclosure (with enclosed critical silencer)

### Open Unit

- Exhaust Silencer, Critical (kit: PA-324470)
- Exhaust Silencer, Hospital (kit: GM32386-KP1)
- Flexible Exhaust Connector, Stainless Steel

### Fuel System

- Auxiliary Fuel Pump
- Flexible Fuel Lines
- Fuel Pressure Gauge
- Subbase Fuel Tanks

### Controller

- Common Failure 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)
- Prime Power Switch
- Remote Annunciator Panel
- Remote Audiovisual Alarm Panel (550 controller only)
- Remote Emergency Stop
- Remote Mounting Cable (550 controller only)
- Run Relay

### Cooling System

- Block Heater; Recommended for Ambient Temperatures Below 0°C (32°F)
- Radiator Duct Flange

### Electrical System

- Alternator Strip Heater
- Battery
- Battery Charger, Equalize/Float Type
- Battery Heater
- Line Circuit Breaker (NEMA type 1 enclosure)
- Line Circuit Breaker with Shunt Trip (NEMA type 1 enclosure)

### Paralleling System

- Reactive Droop Compensator
- Remote Speed Adjust Control/Electronic Governor
- Voltage Adjust Control
- Voltage Regulator Relocation (550 controller only)

### Miscellaneous

- Air Cleaner, Heavy Duty
- Air Cleaner Restriction Indicator
- Closed Crankcase Vent
- Engine Fluids (oil and coolant) Added
- Rated Power Factor Testing
- Rodent Guards
- Skid End Caps

### Literature

- General Maintenance
- NFPA 110
- Overhaul
- Production

### Warranty

- 2-Year Basic
- 2-Year Prime
- 5-Year Basic
- 5-Year Comprehensive
- 10-Year Major Components

### Other Options

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

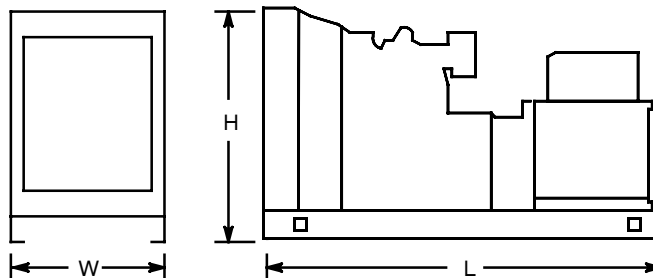
## Dimensions and Weights

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

Wide Skid: 2300 x 1040 x 1133 (90.55 x 40.94 x 44.61)

Narrow Skid: 1998 x 780 x 1067 (78.66 x 30.71 x 42.01)

Weight (radiator model), wet, kg (lb.): 755 (1665)



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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