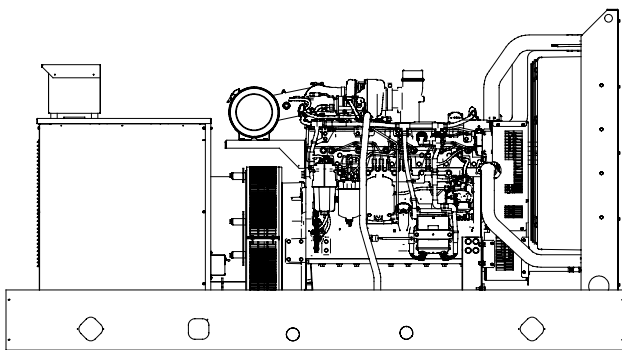




**Ratings Range**

|                 |            |              |
|-----------------|------------|--------------|
|                 |            | <b>60 Hz</b> |
| <b>Standby:</b> | <b>kW</b>  | 250-255      |
|                 | <b>kVA</b> | 313-319      |
| <b>Prime:</b>   | <b>kW</b>  | 225-230      |
|                 | <b>kVA</b> | 281-288      |



**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 generator set complies with ISO 8528-5, Class G2, requirements for transient performance in all generator set configurations. Select the Decision-Maker<sup>®</sup> 550 controller for improved voltage regulation and ISO 8528-5, Class G3, compliance.
- **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 |
| 4UA10      | 120/208 | 3  | 60      | 250/313                   | 867     | 225/281                 | 781  |
|            | 127/220 | 3  | 60      | 250/313                   | 820     | 225/281                 | 738  |
|            | 120/240 | 3  | 60      | 250/313                   | 752     | 225/281                 | 677  |
|            | 139/240 | 3  | 60      | 250/313                   | 752     | 225/281                 | 677  |
|            | 220/380 | 3  | 60      | 250/313                   | 475     | 225/281                 | 427  |
|            | 240/416 | 3  | 60      | 250/313                   | 434     | 225/281                 | 390  |
|            | 277/480 | 3  | 60      | 250/313                   | 376     | 225/281                 | 338  |
| 4UA13      | 347/600 | 3  | 60      | 250/313                   | 301     | 225/281                 | 271  |
|            | 120/208 | 3  | 60      | 255/319                   | 885     | 230/288                 | 798  |
|            | 127/220 | 3  | 60      | 255/319                   | 837     | 230/288                 | 754  |
|            | 120/240 | 3  | 60      | 255/319                   | 767     | 230/288                 | 692  |
|            | 139/240 | 3  | 60      | 255/319                   | 767     | 230/288                 | 692  |
|            | 220/380 | 3  | 60      | 255/319                   | 484     | 230/288                 | 437  |
|            | 240/416 | 3  | 60      | 255/319                   | 442     | 230/288                 | 399  |
| 277/480    | 3       | 60 | 255/319 | 383                       | 230/288 | 346                     |      |
| 347/600    | 3       | 60 | 255/319 | 307                       | 230/288 | 277                     |      |

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   | Brushless,<br>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                         |                                  |
| Permanent magnet (PM) alternator                                 | ±2% Average                      |
| 550 controller (with 0.5% drift<br>due to temperature variation) | 3-Phase Sensing, ±0.25%          |
| Unbalanced load capability                                       | 100% of Rated<br>Standby Current |
| One-step load acceptance   | 100% of Rating                   |
| Peak motor starting kVA:   | (35% dip for voltages below)     |
| 480 V 4UA13 (12 lead)  | 960                              |
| 480 V 4UA10 (12 lead)  | 785                              |

- 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™ II brushless alternator with brushless exciter for excellent load response.

## Application Data

### Engine

| Engine Specifications                      |   |
|--|---|
| Manufacturer                               | John Deere                                  |
| Engine model                               | 6090HF484                                   |
| Engine type                                | 4-Cycle, Turbocharged,<br>Charge Air-Cooled |
| Cylinder arrangement                       | 6 Inline                                    |
| Displacement, L (cu. in.)                  | 9.0 (548)                                   |
| Bore and stroke, mm (in.)                  | 118.4 x 136 (4.66 x 5.35)                   |
| Compression ratio                          | 16.0:1                                      |
| Piston speed, m/min. (ft./min.)            | 457 (1500)                                  |
| Main bearings: quantity, type              | 7, Replaceable Insert                       |
| Rated rpm                                  | 1800  |
| Max. power at rated rpm, kWm (BHP)         | 287 (385)                                   |
| Cylinder head material                     | Cast Iron                                   |
| Crankshaft material                        | Forged Steel                                |
| Valve material:                            |   |
| Intake                                     | Chromium-Silicon Steel                      |
| Exhaust                                    | Stainless Steel                             |
| Governor: type, make/model                 | JDEC Electronic L14<br>Denso HP4            |
| 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)  | 49.0 (1730)                  |
| Exhaust temperature at rated kW, dry exhaust, °C (°F) | 625 (1157)                   |
| Maximum allowable back pressure, kPa (in. Hg)         | Min. 0 (0)<br>Max. 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                                  | 45       |
| 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.) | Electronic, 3 (10)         |
| Max. fuel flow, Lph (gph)           | 240.0 (63.4)               |
| Fuel prime pump                     | Electronic                 |
| Fuel filter                         |                            |
| Secondary                           | 2 Microns @ 98% Efficiency |
| Primary                             | 10 Microns                 |
| Water Separator                     | Yes                        |
| Recommended fuel                    | #2 Diesel                  |

## Lubrication

| Lubricating System                    |               |
|---------------------------------------|---------------|
| Type                                  | Full Pressure |
| Oil pan capacity, L (qt.)             | 32.5 (34.4)   |
| Oil pan capacity with filter, L (qt.) | 33.4 (35.3)   |
| Oil filter: quantity, type            | 1, Cartridge  |
| Oil cooler                            | Water-Cooled  |

## Cooling

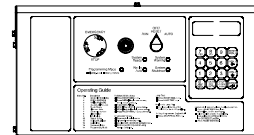
| Radiator System  |              |
|--|--------------|
| Ambient temperature, °C (°F)   | 50 (122)     |
| Engine jacket water capacity, L (gal.)   | 16 (4.25)    |
| Radiator system capacity, including engine, L (gal.)   | 36 (9.5)     |
| Engine jacket water flow, Lpm (gpm)  | 265 (70)     |
| Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)                             | 115.9 (6590) |
| Heat rejected to air charge cooler at rated kW, dry exhaust, kW (Btu/min.)                         | 70.8 (4030)  |
| Water pump type  | Centrifugal  |
| Fan diameter, including blades, mm (in.)   | 863.6 (34.0) |
| Fan, kWm (HP)  | 9.0 (12.1)   |
| Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H <sub>2</sub> O) | 0.125 (0.5)  |

## Operation Requirements

| Air Requirements   |               |
|--|---------------|
| Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm) <sup>‡</sup>          | 368.1 (13000) |
| Combustion air, m <sup>3</sup> /min. (cfm)                                     | 21.8 (770)    |
| Heat rejected to ambient air:  |               |
| Engine, kW (Btu/min.)  | 53.8 (3060)   |
| Alternator, kW (Btu/min.)  | 20.6 (1170)   |
| <sup>‡</sup> Air density = 1.20 kg/m <sup>3</sup> (0.075 lbm/ft <sup>3</sup> ) |               |

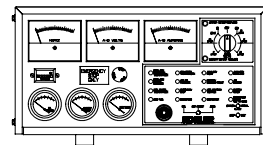
| Fuel Consumption            |                |
|-----------------------------|----------------|
| Diesel, Lph (gph) at % load | Standby Rating |
| 100%                        | 66.5 (17.6)    |
| 75%                         | 50.4 (13.3)    |
| 50%                         | 35.0 (9.2)     |
| 25%                         | 20.5 (5.4)     |
| Diesel, Lph (gph) at % load | Prime Rating   |
| 100%                        | 59.1 (15.6)    |
| 75%                         | 45.3 (12.0)    |
| 50%                         | 31.6 (8.3)     |
| 25%                         | 18.4 (4.9)     |

## Controllers



### Decision-Maker<sup>®</sup> 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<sup>®</sup> 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
- Emission Compliant Engine
- Integral Vibration Isolation
- Oil Drain Extension
- Operation and Installation Literature

## Available Options

### Approvals and Listings

- CSA Approval
- IBC Seismic Certification
- UL 2200 Listing

### Enclosed Unit

- Sound Enclosure and Subbase Fuel Tank Packages
- Weather Enclosure and Subbase Fuel Tank Packages
- 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

### Fuel System

- Auxiliary Fuel Pump
- Flexible Fuel Lines
- Fuel Pressure Gauge
- Subbase Fuel Tanks
- Subbase Fuel Tank with Day Tank

### Controller

- Common Failure Relay
- Communication Products and PC Software (550 controller only)
- Customer Connection
- Dry Contact (isolated alarm)
- Prime Power Switch (550 controller only)
- Remote Annunciator Panel
- Remote Audiovisual Alarm Panel
- Remote Emergency Stop
- Remote Mounting Cable
- 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)
- Safeguard Breaker (16-light controller)

### Paralleling System

- Reactive Droop Compensator
- Voltage Adjust Control
- Voltage Regulator Relocation

### Miscellaneous

- Air Cleaner, Heavy Duty
- Air Cleaner Restriction Indicator
- Crankcase Emissions Canister
- 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

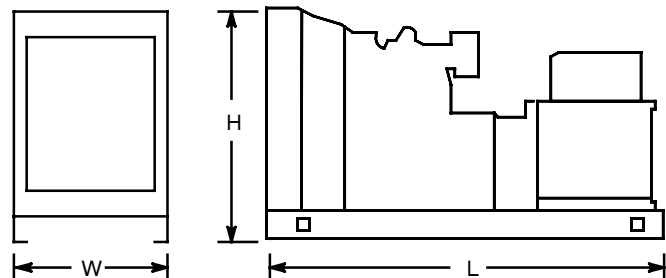
### Other Options

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

## Dimensions and Weights

Overall Size, L x W x H, mm (in.): 3100 x 1250 x 1703  
 (122.05 x 49.21 x 67.06)

Weight (radiator model), wet, kg (lb.): 2132-2268 (4700-5000)



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

## DISTRIBUTED BY: