

# **INVITATION TO BID**

## **Project #LP-2022-06**

**The Town of Lake Placid, Highlands County, Lake Placid, Florida, will receive sealed bids at the Town Hall Office of Kevin McCarthy, Director of Utilities, located at 1069 US HWY 27 N, Lake Placid, Florida 33852 for:**

### **One New KOHLER Model 80REOZJ4, EPA Certified Diesel Generator Set**

85/106kW, @ 0.8 PF, 60 Hz, 3 Phase, UL 2200, 277/480 Volt

**The bid will include the generator only with freight included which the Town will direct purchase from the supplier. The Contractor/Supplier will coordinate delivery to 125 John Smoak Rd, Lake Placid, FL. The generator will be as listed in the attached specifications with the following options: Battery chargers, Fuel Tank for minimum 24 hour runtime, General Maintenance literature one paper copy and 1 electronic, 2 year basic limited warranty. Start up and load testing after installation.**

**Bid envelopes must be sealed and marked, on the outside, with the project name so as to identify the enclosed bids. Bids must be delivered, to the Town of Lake Placid at the Town Hall office of Kevin McCarthy, Utility Director, located at 1069 US HWY 27 N, Lake Placid, Florida 33852 so as to reach said office no later than 2:00 P.M., Wednesday December 7, 2022, at which time the bids will be opened. Bids received later than the date and time as specified will be rejected. Bids will be accepted by email to: [lputilities@mylakeplacid.org](mailto:lputilities@mylakeplacid.org). The Town will not be responsible for the late deliveries of bids for any reason.**

**The town of Lake Placid reserves the right to accept or reject any or all bids and to waive any irregularities in bidding.**

**Kevin McCarthy  
Director of Utilities  
Town of Lake Placid**

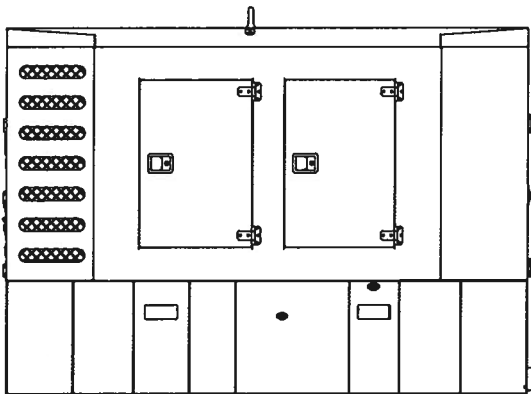
**Advertised on town website using bidnet.**



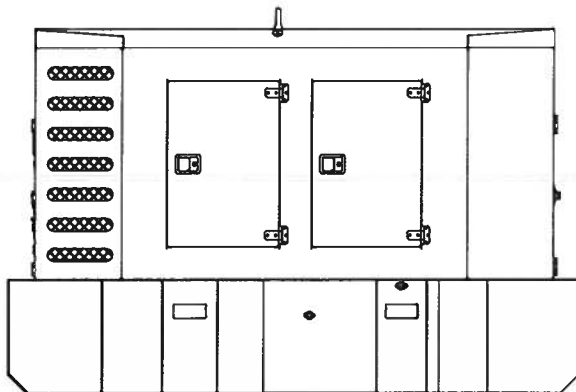
**Tier 4 Final EPA-Certified for Stationary Emergency and Non-Emergency Applications**

### Ratings Range

|          |     | 60 Hz  |
|----------|-----|--------|
| Standby: | kW  | 78-85  |
|          | kVA | 78-106 |
| Prime:   | kW  | 70-76  |
|          | kVA | 70-95  |



Standard Skid Model



Field Dragaable Skid Model

### Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- Approved for use with certified renewable Hydrotreated Vegetable Oil (HVO) / Renewable Diesel (RD) fuels compliant with EN15940/ ASTM D975.
- 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.
- A one-year limited warranty covers all generator set systems and components. Two- and five-year extended limited warranties are also available.
- Alternator features:
  - The unique Fast-Response® X excitation system delivers excellent voltage response and short-circuit capability using a rare-earth, permanent magnet (PM)-excited alternator.
  - The brushless, rotating-field alternator has broadrange reconnectability.
- Engine features:
  - The generator set engine is certified by the Environmental Protection Agency (EPA) to conform to Tier 4 Final nonroad emissions regulations.
  - Heavy-duty air cleaner with air restrictor indicator.
  - Lockable battery disconnect switch.
- Other features:
  - Kohler designed controller for one-source system integration and remote communication. See Controller on page 3.
  - The low coolant level shutdown prevents overheating.
  - Durable steel, sound-attenuating housing with quiet operation of 69 dB(A) log average @ 7 m (23 ft.) with full load at the prime rating.
  - Stainless steel hinges and lockable latches on doors.
  - 125% environmental containment basin for oil and coolant.
  - 110% secondary containment tank for fuel.
  - UL 142 listed subbase fuel tank for 24-hour run time with full load at the prime rating (minimum).
  - Fuel fill and Diesel Exhaust Fluid (DEF) fill with lockable caps.
  - Customer connection panel with main circuit breaker, remote start connection, and emergency stop switch.

### Generator Set Ratings

| Alternator | Voltage | Ph | Hz | 130°C Rise Standby Rating |      | 105°C Rise Prime Rating |      |
|------------|---------|----|----|---------------------------|------|-------------------------|------|
|            |         |    |    | kW/kVA                    | Amps | kW/kVA                  | Amps |
| 4R9X       | 120/208 | 3  | 60 | 85/106                    | 294  | 76/95                   | 263  |
|            | 120/240 | 3  | 60 | 85/106                    | 255  | 76/95                   | 229  |
|            | 120/240 | 1  | 60 | 78/78                     | 325  | 70/70                   | 291  |
|            | 277/480 | 3  | 60 | 85/106                    | 127  | 76/95                   | 114  |
|            | 347/600 | 3  | 60 | 85/106                    | 102  | 76/95                   | 91   |

**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:** The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. **Prime Power Ratings:** 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 and ISO-3046-1. For limited running time ratings, consult the factory. Obtain technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

# Alternator Specifications

| Specifications                           | Alternator                             |
|--|--|
| Manufacturer                             | Kohler                                 |
| Type                                     | 4-Pole, Rotating-Field                 |
| Exciter type                             | Brushless, Rare-Earth Permanent-Magnet |
| Leads: quantity, type                    | 12, Reconnectable<br>6, 600 Volt       |
| Voltage regulator                        | Solid State, Volts/Hz                  |
| Insulation:                              | NEMA MG1                               |
| Material                                 | Class H                                |
| Temperature rise                         | 150°C, Standby                         |
| Bearing: quantity, type                  | 1, Sealed                              |
| Coupling                                 | Flexible Disc                          |
| Amortisseur windings                     | Full                                   |
| Voltage regulation, no-load to full-load | ±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                                    | 4R9X (12 lead)                         |
|  | 385                                    |

- 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.
- Windings are vacuum-impregnated with epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.
- The unique Fast-Response® X excitation system delivers excellent voltage response and short-circuit capability using a rare-earth, permanent magnet (PM)-excited alternator.

## Application Data

### Engine

| Engine Specifications                      |   |
|--|---|
| Manufacturer                               | John Deere  |
| Engine model, type                         | 4045HFG04<br>4-Cycle, Turbocharged<br>Charge Air Cooled |
| Cylinder arrangement                       | 4 Inline  |
| Displacement, L (cu. in.)                  | 4.5 (275)   |
| Bore and stroke, mm (in.)                  | 106 x 127 (4.19 x 5.0)                                  |
| Compression ratio                          | 17.0:1  |
| Piston speed, m/min. (ft./min.)            | 457.2 (1500)  |
| Main bearings: quantity, type              | 5, Replaceable Insert                                   |
| Rated rpm                                  | 1800  |
| Max. power at rated rpm, kWm (BHP)         | 99 (133)  |
| Cylinder head material                     | Cast Iron   |
| Crankshaft material                        | Forged Steel  |
| Valve material:                            |   |
| Intake                                     | Silicon-Chrome stem with Inconel head (NiCr)            |
| Exhaust                                    | CrMo Alloy  |
| Governor: type, make/model                 | 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                       |          |
|--|----------|
| Battery charging alternator:                   |          |
| Ground (negative/positive)                     | Negative |
| Volts (DC)                                     | 14       |
| Ampere rating                                  | 90       |
| Starter motor rated voltage (DC)               | 12       |
| Battery, recommended cold cranking amps (CCA): |          |
| Quantity, CCA rating each                      | One, 450 |
| Battery voltage (DC)                           | 12       |

### Fuel

| Fuel System                                |   |
|--|---|
| Fuel supply line, min. ID, mm (in.)        | 8 (0.31)  |
| Fuel return line, min. ID, mm (in.)        | 4.8 (0.19)  |
| Max. lift, fuel pump: type, m (ft.)        | Electronic, 1.8 (6.0)   |
| Max. fuel flow, Lph (gph)                  | 53.3 (14.1)   |
| Max. return line restriction, kPa (in. Hg) | 20 (5.9)  |
| Fuel prime pump                            | Automatic   |
| Fuel filter                                |   |
| Primary                                    | 2 Microns   |
| Recommended fuel                           | ASTM D975 or EN 590<br>Ultra Low Sulfur Diesel (ULSD) with sulfur content <15 mg/kg (15 ppm) / RD / HVO |

### Exhaust

| Exhaust System   |            |
|--|------------|
| Exhaust manifold type  | Dry        |
| Exhaust flow at rated kW, m <sup>3</sup> /min. (cfm)                                   | 15.1 (533) |
| Exhaust temperature at rated kW, dry exhaust, °C (°F)                                  | 488 (910)  |
| Allowable back pressure, kPa (in. Hg)  | 14.2 (4.2) |
| Back pressure available after losses due to exhaust aftertreatment system, kPa (in.Hg) | 3.2 (1.0)  |
| Exhaust outlet size at user connection point, mm (in.)                                 | 76 (3)     |

### Lubrication

| Lubricating System   |                         |
|--|-------------------------|
| Type   | Full Pressure           |
| Oil pan capacity, L (qt.) §                                    | 20.5 (21.7)             |
| Oil pan capacity with filter, L (qt.) §                        | 21.0 (22.2)             |
| Oil filter: quantity, type §                                   | One, Cartridge          |
| Oil cooler   | Water-Cooled            |
| Oil type §   | API CJ-4 or ACEA E6- E9 |
| § Kohler recommends the use of Kohler Genuine oil and filters. |                         |

## Application Data

### Cooling

#### Radiator System

|  |             |
|--|-------------|
| Ambient temperature at standby rating, °C (°F)   | 45 (113)    |
| Ambient temperature at prime power ratings, °C (°F)  | 50 (122)    |
| Engine jacket water capacity, L (gal.)   | 8.5 (2.25)  |
| Radiator system capacity, including engine, L (gal.)   | 26.1 (6.9)  |
| Engine jacket water flow, Lpm (gpm)  | 218 (58)    |
| Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)                             | 62 (3529)   |
| Heat rejected to charge air cooler at rated kW, dry exhaust, kW (Btu/min.)                         | 13 (740)    |
| Water pump type  | Centrifugal |
| Fan diameter, including blades, mm (in.)   | 681 (26.8)  |
| Fan, kWm (HP)  | 1.1 (1.5)   |
| 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) * | 170 (6000) |
| Combustion air, m <sup>3</sup> /min. (cfm)                 | 6.4 (226)  |
| Heat rejected to ambient air:                              |            |
| Engine, kW (Btu/min.)                                      | 11 (626)   |
| Alternator, kW (Btu/min.)                                  | 11.6 (660) |

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

#### Fuel Consumption\*\*

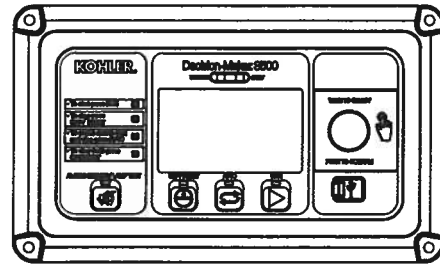
| Diesel, Lph (gph) at % load | Standby Rating |
|-----------------------------|----------------|
| 100%                        | 24.4 (6.4)     |
| 75%                         | 18.2 (4.8)     |
| 50%                         | 12.7 (3.4)     |
| 25%                         | 7.4 (1.9)      |
| Diesel, Lph (gph) at % load | Prime Rating   |
| 100%                        | 22.1 (5.8)     |
| 75%                         | 16.6 (4.4)     |
| 50%                         | 11.7 (3.1)     |
| 25%                         | 7.0 (1.0)      |

\*\* Fuel consumption is up to 4% higher when using HVO/RD than #2 ULSD.

### Sound Enclosure

- Durable steel, sound-attenuating housing with quiet operation of 69 dB(A) log average @ 7 m (23 ft.) with full load at the prime rating.
- Internal-mounted silencer and flexible exhaust connector.
- Fade-, scratch, and corrosion-resistant Kohler® Power Armor™ automotive-grade textured finish.
- Stainless steel hinges and lockable latches on doors.
- Acoustic insulation that meets UL 94 HF1 flammability classification and repels moisture absorption.
- 110% environmental containment basin for fuel, oil, and coolant.

## Controller



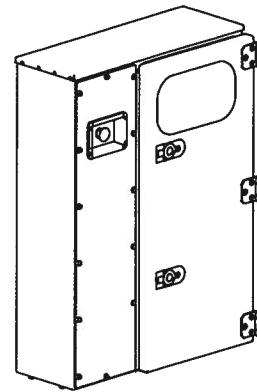
#### Decision-Maker® 3500 Paralleling Controller

Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.

- Paralleling capability with bus sensing, first-on logic, synchronizer, and (isochronous, droop, and external controlled) load sharing
- Digital display with adjustable contrast and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or serial configuration
- Controller supports Modbus® protocol
- Integrated hybrid voltage regulator with ±0.5% regulation
- Potted circuitry for protection from vibration and debris
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Modbus® is a registered trademark of Schneider Electric.

### Customer Connection Panel



- Viewable generator set controller with security cover
- Emergency stop switch
- Main line circuit breaker
  - Reconnectable models: Rating 400 amps, field adjustable based on voltage selected
  - 600 Volt models: Rating 150 amps, field adjustable
- Power connections for Available Options (battery charger and battery heater)
- Remote start connection

### Fuel and DEF Tanks

- Subbase fuel tank for 24-hour run time with full load at prime rating (minimum).
- Fuel tank includes the fuel level gauge, fuel fill with lockable cap, and normal/emergency vents.
- The secondary containment tank's construction protects against fuel leaks or ruptures. The inner (primary) tank is sealed inside the outer (secondary) tank. The outer tank contains the fuel if the inner tank leaks or ruptures.
- DEF tank with DEF quality sensor.

#### Tank Specifications

|                       |                                 |
|-----------------------|---------------------------------|
| Diesel tank. capacity | 727 L (192 gal.)                |
| DEF tank. capacity    | 30.1 L (8.0 gal.)               |
| Recommended DEF       | AUS 32 according to ISO 22241-1 |

## Standard Features

- Alternator Protection
- Batteries, Battery Rack, and Cables
- Integral Vibration Isolation
- Local Emergency Stop Switch
- Oil Drain Extension
- Operation and Installation Literature

## Tier 4 Final Technologies Applied

- Diesel Oxidation Catalyst (DOC)
- High Pressure Common Rail (HPCR)
- Selective Catalytic Reduction (SCR)

## Available Options

### Approvals and Listings

- CSA Certified
- UL 2200 Listing (requires standard skid)

### Controller

- 15-Relay Dry Contact

### Electrical System

- Battery Chargers (qty. 2)
- Block Heater; 1500 W, 120 V, 1 ph.  
Required for ambient temperature below 0°C (32°F).

### Fuel System

- Two-Way Fuel Valve  
(for connection of a user-supplied external fuel tank)

### Skid

- Fuel Tank
- Draggable Fuel Tank  
(heavy gauge steel skid with integrated drains and pull bars)

### Miscellaneous

- Engine Fluids Added

### Literature

- General Maintenance
- NFPA 110
- Overhaul
- Production

### Warranty

- 2-Year Basic Limited Warranty
- 2-Year Prime Limited Warranty
- 5-Year Basic Limited Warranty
- 5-Year Comprehensive Limited Warranty

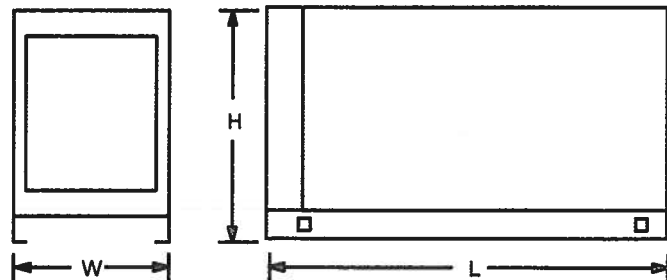
### Other Options

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

## Dimensions and Weights

|   |                       |
|---|-----------------------|
| Overall Size, L x W x H, mm (in.):              | 2951 x 1119 x 2156    |
| Fuel Tank                                       | (116.1 x 44.1 x 84.9) |
| Weight, with engine fluids (no fuel), kg (lb.): | 2542 (5605)           |

|   |                       |
|---|-----------------------|
| Overall Size, L x W x H, mm (in.):              | 3191 x 1119 x 2156    |
| Draggable Fuel Tank                             | (125.7 x 44.1 x 84.9) |
| Weight, with engine fluids (no fuel), kg (lb.): | 2621 (5780)           |



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

**DISTRIBUTED BY:**