

SECTION 16622
PACKAGED ENGINE GENERATOR SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES:

- A. Packaged engine generator system.
- B. Exhaust silencer and fittings.
- C. Fuel lines
- D. Remote control panel.
- E. Battery and charger.
- F. Weatherproof enclosure – Aluminum or Stainless Steel.

1.2 REFERENCES

- A. ANSI/NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
- B. ANSI/NEMA MG 1 - Motors and Generators.
- C. ANSI/NFPA 70 - National Electrical Code.
- D. ANSI/NEMA AB 1 - Molded Case Circuit Breakers.
- E. ANSI/NFPA 110 – Emergency and Stand By Power Systems.

1.3 SYSTEM DESCRIPTION

- A. Engine generator system to provide source of emergency and standby power.
- B. Operation: In accordance with ANSI/NFPA.

1.4 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Section 01300.
- B. Submit shop drawings showing plan and elevation views with overall and interconnection point dimensions, fuel consumption rate curves at various loads, ventilation and combustion air requirements, and electrical diagrams including schematic and interconnection diagrams.
- C. Submit product data showing dimensions, weights, ratings, interconnection points, and internal wiring diagrams for engine, generator, control panel, battery, battery rack, battery charger, exhaust silencer, vibration isolators, automatic changeover and remote annunciator.
- D. Submit manufacturer's installation instructions under provisions of Section 01300.

1.5 PROJECT RECORD DOCUMENTS

- A. Submit record documents under provisions of Section 01700.
- B. Accurately record location of engine generator and mechanical and electrical connections.

1.6 OPERATION AND MAINTENANCE DATA

- A. Submit operation and maintenance data under provisions of Section 01700.
- B. Include instructions for normal operation, routine maintenance requirements, service manuals for engine, and emergency maintenance procedures, and complete manufacturer's diagnostic software package.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in packaged engine generator system with minimum three years documented experience.
- B. Supplier: Authorized franchised distributor of engine generator manufacturer with service facilities within 50 miles of project site.

1.8 Delivery, Storage, and Handling

- A. Deliver products to site under provisions of Section 01600.
- B. Store and protect products under provisions of Section 01600.
- C. Accept packaged engine generator set and accessories on site in crates and verify damage.
- D. Protect equipment from dirt and moisture by securely wrapping in heavy plastic.

1.9 WARRANTY

- A. Provide manufacturer's five-year warranty under provisions of Section 01700.

1.10 MAINTENANCE SERVICE

- A. Furnish service and maintenance of packaged engine generator system for one year from Date of Substantial Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Onan
- B. Kohler
- C. Caterpillar
- D. Katolight

2.2 ENGINE

- A. Type: Water-cooled inline or V-type, four stroke cycle, compression ignition or electric ignition internal combustion engine.
- B. Rating: Sufficient to operate at 10% overload for one hour at specified elevation and ambient limits.
- C. Fuel System: Natural gas with propane gas (LP gas) back up. If natural gas is not available on the site, generator shall be appropriate for LP gas only.
- D. Engine Speed: 1800 rpm.
- E. Governor: Isochronous type to maintain engine speed within 0.5%, steady state, and 5%, no load to full load, with recovery to steady state within 2-seconds following sudden load changes. Equip governor with means for manual operation and adjustment.
- F. Safety Devices: Engine shutdown on high water temperature, low oil pressure, over speed, and engine over crank. Limits as selected by manufacturer.

generator characteristics, with voltage regulation +/- 1% from no load to full load. Include manual controls to adjust voltage drop +/- 5% voltage level, and voltage gain.

2.4 ACCESSORIES

- A. Unit shall have standard and optional accessory equipment packages including but not limited to the following equipment:
- B. Exhaust Silencer: Residential type silencer, with muffler companion flanges and flexible stainless

