

ADVANCED GENERATOR ENCLOSURE [WPGPCSA15]

(Weatherproof, Galvanized Steel, Powder Coated, 15 dB (A) Avg. Sound Attenuation):

GENERATOR ENLOSURE:

A weatherproof type enclosure shall be provided to house the engine/generator and accessories. The enclosure is to be in complete compliance with the National Electrical Code (NEC), and the National Fire Protection Association (NFPA) with regard to clearances around electrical equipment specified herein. The enclosure shall conform to the following construction and design criteria as set forth. Enclosure shall be manufactured by Advanced Manufacturing & Power Systems, Inc., DeLand, FL. (A.M.P.S.) Ph. (386) 822-5565. Substitutions must be submitted in writing to the engineer and be accepted as an approved equal prior to bid date.

- Rigidity wind test equal to 150 MPH
- Roof load equal to 50 lbs. per sq. ft.
- Rain test equal to 4" per hour

Enclosure shall consist of a roof, two (2) side walls, two (2) end walls, and be manufactured of formed galvanized steel components. The enclosure is to be provided with a tiedown frame for securely attaching the entire structure to the base/fuel tank or concrete pad as specified within.

Roof, sidewalls and end walls shall be of formed 14 gauge galvanized steel. The roof is to be bolted to both side and end walls to form a complete weather and wind resistance assembly.

A minimum clearance of 20" shall be allowed for walkway space between the generator frame and interior side walls. A minimum walkway clearance of 30" shall be allowed between the generator end frame and the interior rear wall of the enclosure. The radiator front face shall be sealed to the front wall utilizing and 2" minimum rubber gasket material to minimize recirculation of radiator air discharge and prevent the transmission of vibration from the packaged generator set to the enclosure.

Wall framing shall be incorporated in the panels by forming an open back box structure. Skin material shall be minimum thickness of 14 gauge galvanized sheet steel and be powder coated after forming for maximum weather endurance. Exterior skin panels shall be integral to the wall structure and not separate pieces riveted onto framing members. Wall panels shall be no wider than 24" each and shall be removable without the use of special tools. Wall and roof panels shall be designed so that field replacement can be accomplished without disassembly of the entire structure if damage should occur.

A minimum of sixteen colors shall be available for enclosure exterior. Standard enclosure exterior color is WHITE unless otherwise specified.

PAGE 2

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Roof assembly shall be peaked to aid in rainwater runoff. Cambered roof designs and roofs with thicknesses of less than 14 gauge nominally shall not be considered. Roof assemblies are to be mechanically fastened to the vertical wall sections. Glued or crimped roofs shall not be allowed nor considered as an acceptable alternative.

Air handling shall be as follows: Air will enter the enclosure through a Hood, Plenum or Sound Attenuated Louvers/Baffles, as determined by the specific application and shall allow for at least 120% of total airflow demand for proper cooling to generator set package. The cooling air Inlet system shall prevent water intrusion into the enclosure with the generator set operating at full rated load while allowing for a maximum air restriction of less than 0.25" H₂O. Radiator Discharge shall be through a gravity operated extruded aluminum backdraft type damper and into a vertical discharge plenum or hood. Discharge plenum/hood shall discharge air upward and be provided with a means to positively drain any and all water entering the discharge device. Air discharge devices shall in no event restrict airflow by more than 0.25" H₂O. To ensure adequate airflow for cooling and combustion the static restriction over the entire system shall not exceed 0.50" H₂O. Both Intake and Discharge hoods and plenums shall be provided with removable bird/rodent screening to prevent the entrance of debris, birds, rodents and other vermin.

Acoustical insulation materials shall consist of a UL Classified Thermofiber® insulation material with a heat/fire resistance rating up to 2400° F and provide superior sound attenuation performance. Acoustical insulation material on interior roof and walls is to be mechanically held in place by 0.032" mill finished perforated aluminum with tuned engineered hole diameter for optimum sound attenuation at 1000 Hz. Interior perforated aluminum material shall protect the insulation material as well as allow noise to permeate the absorptive material.

Four-point lifting provisions shall be provided and have sufficient capacity suitable for rigging the entire assembly including installed equipment.

A minimum of two (2) single personnel access doors shall be provided. Doors shall be manufactured of the same material as enclosure. Doors shall be fully gasketed to form a weather tight perimeter seal. Door hinges shall be full length stainless steel piano type and shall be attached with stainless steel hardware. Door handles shall be of a corrosion resistant material and shall provide for a lockable, secure entry point into the enclosure. Doors shall be insulated with no less insulation than is provided in the

enclosure walls for sound attenuation. Drip ledges are to be provided above each entry door and shall overhang the door on both sides by a minimum of 3”.

PAGE 3

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(Weatherproof, Galvanized Steel, Powder Coated, 15 dB(A) Avg. Sound Attenuation):

Enclosure manufacturer shall provide all necessary hardware to internally or externally mount the exhaust silencer(s) specified herein. Silencer mounting hardware shall maintain the weatherproof integrity of the enclosure system. If the silencer is mounted internally it should discharge upward into the radiator discharge plenum or hood where possible, otherwise an aluminum rain collar and rain dress shield shall be provided by the enclosure manufacturer.

Rain Collar and Dress Shield shall be manufactured of .125” aluminum or 14 gauge aluminized steel and designed as a circular fabricated part that does not require hole indexing by the installing contractor during site installation

As a minimum the enclosure shall provide an average 15db(A) sound reduction as measured at one meter, five feet above grade level under free field conditions.