

ADVANCED GENERATOR ENCLOSURE [WPAPCSA15]
(Weatherproof, Aluminum, Powder Coated, 15 dB (A) Avg. Sound Attenuation):

GENERATOR ENCLOSURE:

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 herein. 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 shall be manufactured of formed panel aluminum components. The enclosure is to be provided with a tiedown frame for securely attaching the entire structure to the concrete pad foundation as provided by the installing contractor.

Roof, sidewalls and end walls shall be of formed 0.090 marine grade aluminum panel construction. 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 a walkway between the engine/generator frame and interior side walls, except in front of the generator main circuit breaker. A minimum clearance of 20" walkway shall be allowed between the generator and the interior rear wall. The radiator front face shall be sealed to the front wall utilizing a 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 .090" marine grade aluminum. Enclosure shall have a baked on powder-coat finish for maximum corrosion resistance. 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 36" 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.

Roof assembly shall be peaked to aid in rain runoff. Cambered roof designs and roofs with thicknesses of less than 0.090" 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 the 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 0.025" H₂O. To ensure adequate airflow for cooling and combustion total static restriction over the entire system shall not exceed 0.50" H₂O. Both Intake and Discharge 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 Polyurethane Foam insulation material with a superior sound attenuation performance. Acoustical insulation material on interior roof and walls is to be held in place by 4 mil Acrylic Adhesive.

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

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

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.