

FLORIDA PRODUCT EVALUATION REPORT

PRODUCT: Fabricated roof panels for use on Fidelity Manufacturing generator enclosures. Panels consist of outer aluminum (5052-H32) sheathing, 0.090" thick, attached with 1" wide adhesive tape (VHB-CV62F) to an all-welded aluminum (6061-T6) frame. Frame consists of 2" x 2" x 1/4" aluminum tubes welded to 4" x 4" x 1/4" end support members. All aluminum welding uses MAXAL ER4043 weld filler. Additional details are provided in the below referenced technical documents.

MANUFACTURER: Fidelity Manufacturing (Main office and Fabrication facility)
1900 NE 25th Avenue
Ocala, Florida 34470

Note: Fidelity Manufacturing also may fabricate generator enclosures with associated roof panels at another Fidelity located at:
1101 SW 37th Avenue
Ocala, Florida 34474

EVALUATION STATEMENT: The fabricated roof panel (as described above and on attached technical documents) provides an overall structurally qualified roof system for Fidelity fabricated generator enclosures. This evaluation uses both test results and engineering calculations to show the fabricated roof panel meets the requirements of the Florida Building Code, Sections 1625/1626 with the limitations discussed below.

Specifically, the referenced test report by ICC-NTA shows compliance with TAS-201, TAS-202, and TAS-203 as outlined in the Florida Building Code, 7th Edition (2020), Sections 1625/1626. Please note that the test reports show compliance with all appropriate aspects of the FBC with the possible exception of the deflection limits of Sections 1604.3/1616.3.1. The deflections shown in the test report are not considered a true representation of the final fabricated generator enclosures.

To show compliance with all the requirements of the FBC a separate engineering calculation has been prepared to amend the ICC-NTA provided test report. This calculation considers the overall framing of the genset enclosure to show a more rational approach of calculating maximum roof spans. This calculation shows the roof panel members can meet the deflection limits of FBC, Sections 1604.3/1616.3.1. It should be noted that the referenced calculation evaluates multiple roof member sizes and calculates the maximum span each member can achieve while maintaining stress, deflection, and welding criteria. The referenced ICC-NTA report covers only one member size. This evaluation is to show equivalent member sizes for different maximum spans.

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TECHNICAL DOCUMENTS:

1. Fidelity Manufacturing fabrication drawing (Installation Instructions) of roof panel (copy attached)
2. Certificate of Independence, C. Glenn Pugh, dated 08/06/2023 (copy attached).

REFERENCES:

1. Supplemental calculations, "Roof Load Study", dated 08/10/2023, prepared by C. Glenn Pugh, PE
2. ICC-NTA Test Report FIDM031720-59, R1, dated 03/10/2022
3. Florida Building Code (FBC), 7th Edition, 2020
4. Florida Building Code (FBC), 8th Edition, 2023 (pending with effective date 12/31/2023)

LIMITATIONS:

This panel is approved for use in High Velocity Hurricane Zones as specified in FBC, Sections 1625/1626.

General roof panel limitations are shown on the provided Fidelity Manufacturing drawing. The panel width, length, member sizes, and general orientation are considered the maximum allowable fabrication limits.

The referenced ICC-NTA report uses a design wind pressure of (+/-) 42 psf. The report uses required test pressure modifications and cycle limits as required to meet TAS 202/203.

The referenced supplemental calculations use a design gravity load equivalent to 63 psf. This is a Fidelity standard design load intended to bound any combination of dead, live, and snow loads.

Evaluation Prepared by:



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Signed: 08/22/2023
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