Engineering Alliance, Inc

https://www.eng-alliance.com

06-July-2022

Unirac
1411 Broadway Blvd. NE
Albuquerque, NM 87101
Tel: 505 242 6411

Attn.: Engineering Department

Subject: Engineering Certification for the Unirac RM10 & RM10 EVO Roof Mounted Ballasted System to Support Photovoltaic Panels.

The Unirac RM10 is a ballasted photovoltaic panel support system consisted of two major components - a fully assembled ballasted bay and a module clamp holding the bay and PV modules together. The Unirac RM10 EVO, an evolved version of RM10, is also a ballasted photovoltaic panel support system consisted of three major components - a fully assembled ballasted bay, a tucked north row and a module clamp holding the bay and PV modules together. The ballasted bays are the main dead weight to resist against any uplift due to wind loads. Lateral forces, both wind and seismic, are resisted by friction between the bay/roof pad and the roof surface.

Unirac online design assistant tool U-Builder 2.0 is used to determine the required ballast quantity. The U-Builder 2.0 covers a wide range of system configurations and loading and allows the user to customize the input to match the specific project conditions.

The RM10 & RM10 EVO PV module system satisfies the RWDI wind tunnel test results and the ballasted system design methodology, which makes the U-Builder 2.0 a rational and easy method of designing RM10 & RM10 EVO ballasted PV module design tool in compliance with the structural requirements of the following reference documents:

Codes: 2020 Minnesota Building Code
ASCE/SEI 7-16 Minimum Design Loads for Buildings and other Structures
International Building Code, 2018, & 2021 Edition
Other: Aluminum Design Manual, 2015 & 2020 Edition
RWDI Wind Pressure Study Report #1600097
SEAOC PV1-2012 Report – Structural Seismic Requirements and Commentary for Rooftop Solar PV Arrays
SEAOC PV2-2017 Report - Wind Design for Low-Profile Solar Photovoltaic Arrays on Flat Roofs

This letter certifies that the Unirac “RM10” and “RM10 EVO” Roof Mounted Ballasted Photovoltaic Panel Support System and online design tool “U-Builder 2.0” are in compliance with the reference documents mentioned above.

Please feel free to call for any questions or clarifications.

Prepared By:
Engineering Alliance, Inc
Sugar Land, TX

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: Saddam Ahmad

Date: 06-JUL-2022 License Number: 55381