



**VMC GROUP**  
THE POWER OF TOGETHER™



**CERTIFICATE OF COMPLIANCE**

WIND RESISTANT DESIGN CERTIFICATION OF NONSTRUCTURAL COMPONENTS AND SYSTEMS



Certification No.

**VMA-50974-02C (REVISION 02)**

Expiration Date: 07/31/2023

**Certification Parameters:**

The nonstructural products listed on this certificate are CERTIFIED FOR WIND APPLICATIONS in accordance with the following building code<sup>1</sup> releases.

**IBC 2006, 2009, 2012, 2015, 2018**

The following model designations, options, and accessories are included in this certification. Reference report number **VMA-50974-02** as issued by The VMC Group for a complete list of certified models, included accessories/options, and certified installation methods.

**MTU 16V Diesel Generator Sets  
XS54 Enclosures**

The above referenced equipment is **APPROVED** for wind application when properly installed<sup>2</sup>, used as intended, and contains a Wind Certification Label referencing this Certificate of Compliance<sup>3</sup>. Installations in essential facilities, for life safety applications, and/or of equipment containing hazardous contents are permitted and included in this certification with an Equipment Importance Factor assigned as  $I_p=1.15$ .

| Certified Wind Design Levels |   |                                  |   |
|------------------------------|---|----------------------------------|---|
| Certified<br>IBC 2018        | Importance $I_p \leq 1.15$<br>Exposure Categories A-C<br>Risk Categories I-IV | <b>V ≤ 190 mph</b><br>V ≤ 85 m/s | <b>V ≤ 165 mph</b><br>V ≤ 72 m/s  |
|                              |   | <b>z ≤ 15 ft</b><br>z ≤ 5 m      | <b>z ≤ 500 ft</b><br>z ≤ 152 m  |
|                              |   | Pressure<br>Basis <sup>4</sup>   | $\frac{F_h}{A_f} = q_z G C_f =$<br><b>153.73 lbs/ft<sup>2</sup></b><br>7.69 kPa |

**Certified Wind Installation Methods**

Rigid mounting from unit base to rigid structure



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**Certified Product Table:**

| Model                           | Description                      | Wind Design Levels        | Material     | Max Dimensions (in) |       |        |  |
|---------------------------------|----------------------------------|---------------------------|--------------|---------------------|-------|--------|--|
|                                 |                                  |                           |              | Length              | Width | Height |  |
| XS545380.00076 / XS545380.00080 | 650-900 kW Enclosure Level 1-2   | 190 MPH<br>and<br>130 MPH | Carbon Steel | 271                 | 109   | 140    |  |
| XS545380.00078 / XS545380.00082 | 650-900 kW Enclosure Level 3     |                           |              | 333                 | 109   | 140    |  |
| XS545380.00046 / XS545380.00050 | 1000-1250 kW Enclosure Level 1-2 |                           |              | 285                 | 109   | 140    |  |
| XS545380.00048 / XS545380.00039 | 1000-1250 kW Enclosure Level 3   |                           |              | 347                 | 109   | 140    |  |
| XS546380.00005 / XS546380.00009 | 1000-1250 kW Enclosure Level 1-2 |                           |              | 285                 | 109   | 140    |  |
| XS545380.00077 / XS545380.00081 | 650-900 kW Enclosure Level 1-2   |                           |              | 271                 | 109   | 140    |  |
| XS545380.00079 / XS545380.00083 | 650-900 kW Enclosure Level 3     |                           | 333          | 109                 | 140   |        |  |
| XS545380.00047 / XS545380.00051 | 1000-1250 kW Enclosure Level 1-2 |                           | 285          | 109                 | 140   |        |  |
| XS545380.00049 / XS545380.00040 | 1000-1250 kW Enclosure Level 3   |                           | 347          | 109                 | 140   |        |  |
| XS546380.00006 / XS546380.00010 | 1000-1250 kW Enclosure Level 1-2 |                           | 285          | 109                 | 140   |        |  |
| XS546380.00008 / XS546380.00012 | 1000-1250 kW Enclosure Level 3   |                           | 347          | 109                 | 140   |        |  |
|                                 |                                  |                           |              | Aluminum            |       |        |  |

Note: Units are only approved with design changes as shown in the referenced certification report listed on page 1.

**Level Comparison Table:**

| IBC                            |            | 2018 |     |     | 2015, 2012 |     |     | 2009, 2006 |     |     |
|--------------------------------|------------|------|-----|-----|------------|-----|-----|------------|-----|-----|
| ASCE                           |            | 7-16 |     |     | 7-10       |     |     | 7-05       |     |     |
| Exposure Category              |            | B    | C   | D   | B          | C   | D   | B          | C   | D   |
| Velocity <sup>5</sup><br>(mph) | z ≤ 15 ft  | 232  | 190 | 173 | 232        | 190 | 173 | 163        | 133 | 121 |
|                                | z = 15 ft  | 232  | 190 | 173 | 232        | 190 | 173 | 163        | 133 | 121 |
|                                | z ≤ 500 ft | 184  | 165 | 153 | 184        | 165 | 153 | 133        | 116 | 107 |



VMA-50974-02C (Revision 02)  
Issue Date: July 10, 2017  
Revision Date: June 26, 2020  
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#### Notes and Comments:

- The following building codes are addressed under this certification:
  - ASCE 7-16 - Minimum Design Loads for Buildings and Other Structures
  - ASCE 7-10 - Minimum Design Loads for Buildings and Other Structures
  - ASCE 7-05 - Minimum Design Loads for Buildings and Other Structures
  - IBC 2018 – referencing ASCE 7-16
  - IBC 2015 – referencing ASCE 7-10
  - IBC 2012 – referencing ASCE 7-10
  - IBC 2009 – referencing ASCE 7-05
- Refer to the manufacturer supplied installation drawings for anchor requirements and mounting considerations for seismic applications. Required anchor locations, size, style, and load capacities (tension and shear) are may be specified on the installation drawings or specified by a 3rd party. Mounting requirement details such as anchor brand, type, embedment depth, edge spacing, anchor-to-anchor spacing, concrete strength, special inspection, wall design, and attachment to non-building structures must be outlined and approved by the Engineer of Record for the project or building. Structural walls, structural floors, and housekeeping pads must also be seismically designed and approved by the project or building Structural Engineer of Record to withstand the seismic anchor loads as defined on the installation drawings. The installing contractor is responsible for observing the installation detailed in the seismic installation drawings and the proper installation of all anchors and mounting hardware.
- For this certificate to remain valid, it must correspond to the "Wind Certification Label" found affixed to the unit by the factory. The label ensures the manufacturer built the unit in conformance to the IBC wind design criteria set forth by the Product Certification Agency, The VMC Group, and meets the wind design levels claimed by this certificate.
- The qualified wind design pressure stated is for the horizontal wind pressure for applications utilizing ASCE 7-10 OR -05, for more detailed ranges of qualified wind design levels, sees the report cited on Page 1. This wind design pressure utilizes LRFD load combinations.
- Design velocity (highlighted in yellow) was chosen based on the corresponding ASCE 7 wind map. Other velocities were derived from the design pressure resulting from the design velocity.
- Mechanical, Electrical, and Plumbing connections to the equipment must be flexibly attached as to not transfer load through the connection. The structural integrity of any conduit, cable trays, piping, ductwork and/or flexible connections is the responsibility of others. This certification does not guarantee the equipment will remain compliant to NEMA, IP, UL, or CSA standards after a wind action.
- This certificate applies to units manufactured at:

MTU Onsite Energy, 100 Power Drive, Mankato, MN 56001

John P. Giuliano, PE  
President, The VMC Group

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