



**CERTIFICATE OF COMPLIANCE**  
**SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS**



Certification No.

**VMA-47676-01C (Revision 10)**

Expiration Date: 8/31/2026

**Certification Parameters:**

The nonstructural products (mechanical and/or electrical components) listed on this certificate are CERTIFIED<sup>1</sup> FOR SEISMIC APPLICATIONS in accordance with the following building code<sup>2</sup> releases.

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

The following model designations, options, and accessories are included in this certification. Reference report number VMA-47676-01 as issued by The VMC Group for a complete list of certified models, included accessories/options, and certified installation methods.

**Yaskawa America; Variable Frequency Drives**  
**Z1000 and A1000 Series; 0.5HP-600HP 208V-600V**

The above referenced equipment is APPROVED for seismic application when properly installed<sup>3</sup>, used as intended, and contains a Seismic Certification Label referencing this Certificate of Compliance<sup>4</sup>. As limited by the tabulated values, below grade, grade, and roof-level installations, 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  $I_p=1.5$ . The equipment is qualified by successful seismic shake table testing at the nationally recognized University of California Berkeley Pacific Earthquake Engineering Research Center and Clark Dynamic Test Laboratory under the witness of the ISO Accredited Product Certification Agency, the VMC Group.

Certified Seismic Design Levels			
Certified IBC	Importance $I_p \leq 1.5$ Soil Classes A-E Risk Categories I-IV Design Categories A-F	$z/h \leq 1.0$	$z/h = 0.0$
		$S_{DS} \leq 2.000 \text{ g}$	$S_{DS} \leq 2.000 \text{ g}$

Certified Seismic Installation Methods	
Directly To Non-Structural Wall/Enclosure	Directly To Structural Wall

**HEADQUARTERS**

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**Certified Product Table:**

VFD Series	VFD Type	Standard Drive Model Series	Output Current Rating	Power Option	Current Options	Nominal HP	Rated Input Voltage	NEMA Rating
A1000	Standard	CIMR-AU2A	-0(360-415)	-XXX	-XXX	150-175	208V	Type1
		CIMR-AU4A	-0(250-675)			200-600	480V	
		CIMR-AU5A	-0(192-242)			200-250	600V	
Z1000	Bypass	CIMR-ZU2A	-0(011-396)	-PXX	-TXX	3-100	208V	
		Z1B1D	-(002-169)			0.5-60		
	Z1C1D	-(002-273)	-PXXX	0.5-100				
	Standard	CIMR-ZU4A	-0(005-590)	-XXX	-XXX	3-500	480V	
	Bypass	Z1B1B	-(001-180)	-PXX	-TXX	0.5-150		
Z1C1B	-(001-240)	-PXXX	0.5-200					

**Notes:**

- XXX denotes Enclosure, Environmental and Revision Options, -No structure or components change  
X- denotes Enclosure Type (F= with NEMA1 Guards, A = without NEMA1 Guards)  
-X- denotes Environmental Specs (A through Z options possible)  
-X denotes Product Revision Level (A through Z options possible)
- Full Model Number Designation can contain upto 15 characters
- PXX denotes Power Options (Only PM, PB, PG, PMB & PMG options are permitted)
- PXXX denotes Power Options (Only PC, PM, PF, PR, PCF, PCR, PMF & PMR options are permitted)
- TXX denotes Control Options (Only TW, TD, TL, TWD & TWL options are permitted)

Type	S <sub>DS</sub> (z/h=0)	S <sub>DS</sub> (z/h=1)	A <sub>Flex-H</sub>	A <sub>Rig-H</sub>	A <sub>Flex-V</sub>	A <sub>Rig-V</sub>	F <sub>p</sub> /W <sub>p</sub>
AC156	2	2	3.2	2.4	1.34	0.54	1.5

This certification includes the Z1000 and A1000 series VFDs and included factory supplied options. This certification only covers listed options in the certified product table. The VFDs shall be installed per the manufacturer supplied seismic installation instructions. For a list of certified configurations and options please directly contact the manufacturer. This certification excludes all non-factory supplied accessories and options, including but not limited to isolation/restraint devices and other electrical/mechanical components not detailed in the above charts. Flexibility in the connections must be maintained as to not transmit load into the equipment. Design specials are outside the scope of this certification.



**VMA-47676-01C (Revision 10)**  
Issue Date: Wednesday, June 6, 2012  
Revision Date: Monday, September 18, 2023  
Expiration Date: Monday, August 31, 2026



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### SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS

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#### Notes & Comments:

1. All equipment listed herein successfully passed the seismic acceptance criteria for shake testing non-structural components and systems as set forth in the ICC AC-156. The Test Response Spectrum (TRS) enveloped the Required Response Spectrum (RRS) for all units tested. The tested units were representative sample(s) of a contingent of models and all remained captive and structurally sound after the seismic shake simulation. The units also remained functionally operational after the simulation testing as functional testing was completed by the equipment manufacturer before and after the seismic simulations. Although a seismic qualified unit inherently contains some wind resisting capacity, that capacity is undetermined and is excluded from this certification. Snow/Ice loads have been neglected and thus limit the unit to be installed both indoors (covered by an independent protective structure) and out of doors (exposed to accumulating snow/ice) for ground snow loads no greater than 30 psf for all applications.
2. The following building codes are addressed under this certification:
  - IBC 2018 referencing ASCE7-16 and ICC-ES AC-156
  - IBC 2015 referencing ASCE7-10 and ICC-ES AC-156
  - IBC 2012 referencing ASCE7-10 and ICC-ES AC-156
  - IBC 2009 referencing ASCE7-05 and ICC-ES AC-156
  - IBC 2006 referencing ASCE7-05 and ICC-ES AC-156
3. 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) 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 ensuring the proper installation of all anchors and mounting hardware.
4. For this certificate and certification to remain valid, this certificate must correspond to the "Seismic Certification Label" found affixed to the unit by the factory. The label ensures the manufacturer built the unit in conformance to the IBC seismic design criteria set forth by the Certified Seismic Qualification Agency, the VMC Group, and meets the seismic design levels claimed by this certificate.
5. 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 makes no statements of compliance in regards to NEMA, IP, UL, CSA, or other relevant standards after a seismic event. For compliance to other relevant standards, please contact the manufacturer.
6. This certificate applies to units manufactured at:  
150 W Oakwood Road, Oak Creek, WI 53154
7. This certification follows the VMC Group's ISO-17065 Scheme.

John P. Giuliano, PE  
President, VMC Group



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