



VMC GROUP
THE POWER OF TOGETHER™



CERTIFICATE OF COMPLIANCE

SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS



Certification No.

VMA-44407-02C (Revision 7)

Expiration Date: 12/31/2025

Certification Parameters:

The nonstructural products (mechanical and/or electrical components) listed on this certificate are CERTIFIED¹ FOR SEISMIC APPLICATIONS in accordance with the following building code² releases.

IBC 2015, 2012, 2009, 2006

The following model designations, options, and accessories are included in this certification. Reference report number VMA-44407-02 as issued by The VMC Group for a complete list of certified models, included accessories/options, and certified installation methods.

**ASEA Brown Boveri; Variable Frequency Drives
ACH550, ACS550, ACQ550, ACB530, AYK550 Series; 645A Max Output Current**

The above referenced equipment is APPROVED for seismic application when properly installed³, used as intended, and contains a Seismic Certification Label referencing this Certificate of Compliance⁴. 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 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 ≤ 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 Structural Wall	Directly To Non-Structural Wall/Enclosure
Rigid Mounting From Unit Base To Rigid Structure	

HEADQUARTERS
113 Main Street
Bloomington, NJ 07403
Phone: 973.838.1780
Toll Free: 800.569.8423
Fax: 973.492.8430

CALIFORNIA
180 Promenade Circle
Suite 300
Sacramento, CA 95834
Phone: 916.634.7771

TEXAS
11930 Brittmoore Park Drive
Houston, TX 77041
Phone: 713.466.0003
Fax: 713.466.1355

thevmcgroup.com





CERTIFICATE OF COMPLIANCE

SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS

Certified Product Table:

Product Series	Model	Max Output Current Rating	Voltages	Inverter Frame Size	Max. Weight [lbs.]	U.L Type			
ACH550	-VCR, -VDR	78A	2-6	R1 - R4	93	1			
ACS550	-PC, -PD				194	3R			
ACQ550									
ACH550	-PCR, -PDR	645A		R1 - R8	268	1, 12			
	-BCR, -BDR								
ACS550									
ACQ550	-U1, -U0, -01	827			838				
ACB530									
ACH550	-UH, -U0, -01								
AYK550		486A			1045				
ACS550									
ACQ550	-PC, -PD								
ACB530									
ACH550	-PCR, -PDR								
	-BCR, -BDR								

For a detailed list of equipment ratings and sizes, please contact the manufacturer.

Group	Type	S _{DS} (z/h=0)	S _{DS} (z/h=1)	A _{Flex-H}	A _{Rig-H}	A _{Flex-V}	A _{Rig-V}	F _p /W _p
Seismic	AC156	2.00	2.00	3.20	2.40	1.33	0.53	1.50

This certification includes the product as sold by the factory and only included options that are a catalogue design and factory supplied. The product shall be installed and attached to the building structure per the manufacturer supplied seismic installation instructions. This certification excludes all non-factory supplied accessories, including but not limited to enclosures, isolation/restraint devices, remote control panels, mounting brackets and other electrical/mechanical components.



VMA-44407-02C (Revision 7)
Issue Date: Thursday, May 15, 2008
Revision Date: Wednesday, November 9, 2022
Expiration Date: Wednesday, December 31, 2025



VMC GROUP
THE POWER OF TOGETHER™



CERTIFICATE OF COMPLIANCE

SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS

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 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 does not guarantee the equipment will remain compliant to NEMA, IP, UL, or CSA standards after a seismic event.
6. This certificate applies to units manufactured at:
16250 West Glendale Dr., New Berlin, Wisconsin 53151
7. This certification follows the VMC Group's ISO-17065 Scheme.

John P. Giuliano, PE
President, VMC Group



VMA-44407-02C (Revision 7)
Issue Date: Thursday, May 15, 2008
Revision Date: Wednesday, November 9, 2022
Expiration Date: Wednesday, December 31, 2025

