





CERTIFICATE OF COMPLIANCE SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS



Certification No.

VMA-51070-01C (Revision 9)

Expiration Date: 1/31/2023

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 2018, 2015, 2012

The following model designations, options, and accessories are included in this certification. Reference report number VMA-51070-01 as issued by VMC Group for a complete list of certified models, included accessories/options, and certified installation methods.

Cummins Power Generation, Inc.; Gas Generators C20-200N6 Series; 20kW - 200kW

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 Dynamic Certification Laboratories under the review of the ISO Accredited Product Certification Agency, the VMC Group.

Certified Seismic Design Levels					
Certified IBC	Importance $I_p \le 1.5$	z/h ≤ 1.0	z/h = 0.0		
	Soil Classes A-E Risk Categories I-IV Design Categories A-F	S _{DS} ≤ 2.500 g	S _{DS} ≤ 2.500 g		

Certified Seismic Installation Methods

Rigid Mounting From Unit Base To Rigid Structure

HEADQUARTERS

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

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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









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Certified Product Table:

Model	Max Rating [kW]	Max Depth [in]	Max Width [in]	Max Height [in]	Max Weight [lb]	
C20N6	20		34		1,110	
C22N6	22	82		 	1,150	
C25N6	25			46	,	
C30N6, C30N6H	30				1,300	
C36N6, C36N6H	36	104			1,380	
C40N6, C40N6H	40				1,420	
C45N6, C45N6H	45			1	2,580	
C50N6, C50N6H	50				2,600	
C60N6, C60N6H	60			 	2,900	
C70N6	70	136			2,870	
C80N6	80			58	3,030	
C100N6	100	 	40	 	3,170	
C125N6	125	 160	 		3,770	
C150N6	150		160	 	72	4,350
C175N6, C200N6	200		200		1	4,663
C200N6		 	 	83	4,140	

Note: "H" indicates high speed (3600RPM, as opposed to the standard 1800RPM) Note: Dimensions and Weight include sound level 2 (SL2) enclosure baffle

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Group	Туре	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	2.500	2.500	4.000	3.000	1.667	0.667	1.875

This certification includes the open generator set and the enclosed generator set. The generator set and included options shall be a catalogue design and factory supplied. The generator set and applicable options shall be installed an 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 mufflers, isolation/restraint devices, remote control panels, remote radiators, pumps and other electrical/mechanical components.



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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:

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- 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
- 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.
- This certificate applies to units manufactured at: Cummins Power Generation Inc., 1400 73rd Ave. NE, Minneapolis, MN 55432
- 7. This certification follows the VMC Group's ISO-17065 Scheme.

fol / A.D.

John P. Giuliano, PE President, VMC Group



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