



VMC GROUP
THE POWER OF TOGETHER™



A Rolls-Royce
solution

CERTIFICATE OF COMPLIANCE

SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS



Certification No.

VMA-45935-01C (Revision 13)

Expiration Date: 8/31/2025

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 2021, 2018, 2015, 2012, 2009

The following model designations, options, and accessories are included in this certification. Reference report number VMA-45935-01 as issued by The VMC Group for a complete list of certified models, included accessories/options, and certified installation methods.

Rolls-Royce Solutions America Inc.; Diesel Gensets
4000 Series; 1250kW - 3250kW

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 and Dynamic Certification Laboratories 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	$z/h \leq 1.0$	$z/h = 0.0$
		$S_{DS} \leq 2.000 \text{ g}$	$S_{DS} \leq 2.500 \text{ g}$

Certified Seismic Installation Methods
External Isolation 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

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:

Model	Frequency	Rating	EPA Rating	Max. Length [in.]	Max. Width [in.]	Max. Height [in.]	Max. Weight [lbs.]
mtu 12V4000 DS1250	60	1250	Tier 2	262	122	121	38,125
mtu 12V4000 DS1637	50	1500		263			123
mtu 12V4000 DS1500	60					1750	
mtu 12V4000 DS1825	50	2000		288	141		55,290
mtu 12V4000 DS1750	60					2250	282
mtu 12V4000 DS2000	50	2500		307	131		
mtu 16V4000 DS2000	60					2800	320
mtu 16V4000 DS2250	50	3000		321	150		
mtu 16V4000 DS2500	60					3250	320
mtu 20V4000 DS2500	50	3000		320	132		
mtu 20V4000 DS2800	60					3250	320
mtu 20V4000 DS3100	50	3250		320	132		
mtu 20V4000 DS3000	60					3250	320
mtu 20V4000 DS3250	50	3250		320	132		
mtu 20V4000 DS3300	60					3250	320

Note: Refer to seismic certification report for seismic design level limitations of specific subcomponents.

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
AC156	2.50	2.00	3.20	2.40	1.67	0.67	4.50

This certification includes the open generator set only. The generator set and included options shall be a catalogue design and factory supplied. The generator set and applicable options shall be installed and attached to the building structure 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, including but not limited to mufflers, isolation/restraint devices, remote control panels, remote radiators, pumps and other electrical/mechanical components.



VMA-45935-01C (Revision 13)
Issue Date: Friday, October 1, 2010
Revision Date: Tuesday, June 21, 2022
Expiration Date: Sunday, August 31, 2025



VMC GROUP
THE POWER OF TOGETHER™



A Rolls-Royce
solution

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 2021 referencing ASCE7-16 and ICC-ES AC-156
 - 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
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:
100 Power Drive, Mankato, MN 56001
7. This certification follows the VMC Group's ISO-17065 Scheme.

John P. Giuliano, PE
President, VMC Group



VMA-45935-01C (Revision 13)
Issue Date: Friday, October 1, 2010
Revision Date: Tuesday, June 21, 2022
Expiration Date: Sunday, August 31, 2025

