CERTIFICATE OF COMPLIANCE

SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS

Certification No.

VMA-50998-01C (Revision 17)

Expiration Date: 9/30/2026

Certification Parameters:

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

IBC 2021, 2018, 2015, 2012

The following model designations, options, and accessories are included in this certification. Reference report number VMA-50998-01 as issued by VMC Group for a complete list of certified models, included accessories/options, and certified installation methods.

Cummins Power Generation, Inc.; Diesel Gensets

DQGAx, DQKAx, DQKAN, DQLx, C3000D6EB, C2750D6E; 1250kW - 3000kW

The above referenced equipment is **APPROVED** for seismic application when properly installed[3], used as intended, and contains a Seismic Certification Label referencing this Certificate of Compliance[4]. 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 CERL (US Army Corp. of Engineers) Laboratory under the witness of the ISO Accredited Product Certification Agency, the VMC Group.

Certified Seismic Design Levels[8]			
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
		$S_{DS} \leq 2.000$ g	$S_{DS} \leq 2.200$ g

The qualified seismic design level stated is the highest for all series this certificate covers. For more information, see the certified product tables on page 2.

Certified Seismic Installation Methods[9]	
External Isolation Mounting From Unit Base To Fuel Tank	External Isolation Mounting From Unit Base To Rigid Structure
Rigid Mounting From Unit Base To Rigid Structure	Rigid Mounting From Unit Base To Fuel Tank

CERTIFICATE OF COMPLIANCE

SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS

Certified Product Table:

Series	Model	Max Rating [kW]	Length [in]	Width [in]	Height [in]	Max Weight [lbs]	Configuration
QSK50 Tier 2	DQGAA, B	1250, 1500	235	79	112	29,262	Off Tank
QSK50 Trinity	DQGAE, F, G, H, J, K, M, N, S		254	98	123	33,556	
QSK60	DQKAA, B	1750, 2000	244	100	120	35,846	
QSK60 Trinity	DQKAD, E, F, G, H, J, M	1750, 2000, 2250	275	98	161	43,805	
QSK60 Ghost	DQKAN	2500	278	104	125	51,366	
QSK78	C2750D6E, C3000D6EB	2750, 3000	284	121	143	55,600	
	DQLC, D, E, F, H	2500, 2750	292	125	153	57,168	
QSK60	DQKAA, B	1750, 2000	244	100	152	62,592	On Tank
QSK60 Trinity	DQKAD, E, F, G, H, J, M	1750, 2000, 2250	275	98	185	70,639	
QSK60 Ghost	DQKAN	2500	278	104	125	70,760	
QSK78	DQLC, D, E, F, H	2500, 2750	308	125	178		

Radiator Manufacturer	Type	S_{DS} (z/h=0)	S_{DS} (z/h=1)	A_{Flex-H}	A_{Rig-H}	A_{Flex-V}	A_{Rig-V}	Rigid F_p/W_p	Isolated F_p/W_p
Bearward	AC156	1.94	0.647	1.94	0.78	1.3	0.52	0.47	1.46
Modine			1.94	3.1	2.33			1.4	4.37
IEA		2.10	2.0	3.20	2.40	1.41	0.57	1.20	4.50
AKG		2.20	1.90	3.04	2.28	1.47	0.59	N/A	4.28

This certification includes the open 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 and attached to the building structure per the manufacturer supplied seismic installation instructions. This certification excludes tanks (but approves the attachment of the unit to tanks), After Treatment Units (ATUs), all non-factory supplied accessories, including but not limited to mufflers, isolation/restraint devices, remote control panels, pumps and other electrical/ mechanical components.

Notes
1: DQGAE-S and DQKAD-M generator sets are certified for the configuration that allows the use of remote radiators. However, the seismic certification of said remote radiators is the responsibility of others and is not covered under this certification.
2: This certification includes the use of the breather stand on the ECO generator set models. All other generator set models are not certified for use with the breather stand.
3: SDS level is limited by radiator manufacturer used.

IBC CERTIFIED VMC GROUP

VMA-50998-01C (Revision 17)
Issue Date: May 2, 2017
Revision Date: June 16, 2026
Expiration Date: September 30, 2026

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

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:
   1400 73rd Ave NE, Minneapolis, MN 55432
   Royal Oak Way South, Daventry, NN11 8NU, United Kingdom

7. This certification follows the VMC Group's ISO-17065 Scheme.

8. The qualified seismic design level stated is the highest for all series this certificate covers. For more information, see the certified product tables on page 2.

9. The certified seismic installation methods stated are a summary for all product lines this certificate covers. For individual certified seismic installation methods, see the certified product tables.

John P. Giuliano, PE
President, VMC Group

VMA-50998-01C (Revision 17)
Issue Date: May 2, 2017
Revision Date: June 16, 2026
Expiration Date: September 30, 2026