

CERTIFICATE OF COMPLIANCE

SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS



Certification No.

VMA-50771-01C (Revision 12)

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 2021, 2018, 2015, 2012

The following model designations, options, and accessories are included in this certification. Reference report number VMA-50771-01 as issued by VMC Group for a complete list of certified models, included accessories/options, and certified installation methods.

Rehlko; Diesel Gensets
KD Series; 610kW - 4000kW

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 CERL (US Army Corp. of Engineers) Laboratory and 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 ⁸			
Certified IBC	Importance $I_p \leq 1.5$ Soil Classes A-E Risk Categories I-IV Design Categories A-F	$z/h \leq 1.0$	$z/h = 0.0$
		$S_{DS} \leq 0.667 \text{ g}$	$S_{DS} \leq 2.000 \text{ g}$

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

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



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Certified Product Table:

Model	Max Rating [kW]	Configuration	Max Length [in.]	Max Width [in.]	Max Heigh [in.]	Open Genset Max Weight [lbs.]	Enclosed Genset On Tank Max Weight [lbs.]	Mounting Configurations
KD610	610	Open or Enclosed, On or Off Tank	404	120	180	11,505	67,575	Rigid/Isolated
KD700	700					12,345	68,415	
KD750	750					12,875	68,945	
KD800	800		360	103	171.879	16,440	74,052	
KD900	900		435	103	172	17,131	77,928	
KD1000	1000					17,821	78,618	
KD1250	1250		439	119	180.895	30,191	104,120	
KD1250-A					189			
KD1350	1350				181			
	1500							
KD1600	1600							
KD1750	1750							
KD2000	2000		531	137	188	48,516	116,051	
KD2250	2250					49,222	116,757	
KD2500	2500					51,913	119,448	
KD2800 - KD3250	2800	Open	301	138	136	61,870	N/A	Isolated
KD3500- KD4000	4000		321	138	136	77,631		

*Note: All models are certified in the Standard and Remote Radiator Configuration

**Note: Remote Radiator Configuration does not allow for the use of Tanks & Enclosures

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
All on Tank Genset Models; KD610-750 and KD3500-4000 Off Tank Models	AC156	2.00	0.67	2.00	0.80	1.33	0.53	1.50
KD800-3250 Off Tank Models			1.75	2.80	2.10			3.94

This certification also includes the sub-base tank as a stand-alone accessory. 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 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-50771-01C (Revision 12)
Issue Date: December 29, 2016
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Expiration Date: December 31, 2025

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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 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:
 - Rehiko, N7650 Lakeshore Road, Sheboygan, WI 53083
7. This certification follows the VMC Group's ISO-17065 Scheme.
8. The qualified seismic design level stated is the lowest 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.



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