CERTIFICATE OF COMPLIANCE

SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS

Certification No.

VMA-54357-01C (Revision 2)

Expiration Date: 4/30/2026

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-54357-01 as issued by VMC Group for a complete list of certified models, included accessories/options, and certified installation methods.

Trane; Blower Coils

BCHE 12-120, BCVE 24-120; 1 - 10 ton

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 Dynamic Certification Laboratories 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	$S_{DS} \leq 2.270$ 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	Rigidly Suspended By Rods And Using Cable Sway Bracing

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Certified Product Table:

Model	Unit Size	Maximum Weight [lbs.]	Maximum Width [in.]	Maximum Height [in.]	Maximum Length [in.]	Mounting Configuration
BCHE	12	274	32	17	92	Suspended w/ Isolators and Cable Sway Bracing
	18	296	34			
	24	318	36			
	36	430	48		106	
	54	531	52	18	121	
	72	631	64		132	
	90	695	54	26	131	
	120	807	64		143	
BCVE	24	242	33	61	22	Rigid Base Mounted with or without Neoprene Pads
	36	298		65	26	
	48	380	38	72	27	
	60	418		74	30	
	72	731	64	68	88	
	90	801	54	81	89	
	120	920	64		95	

Notes:
Maximum weight includes basic unit, largest wet coil, motor, control box, bottom filter access section, mixing box, and discharge attenuator as applicable
Maximum Length includes basic unit, angle filter section, return attenuator, and discharge attenuator.
Maximum height includes legs for vertical units.

Models	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	Mounting Configuration
BCHE	2.27	2.27	3.63	2.72	1.51	0.61	4.09	Ceiling Suspended with Isolators
BCVE		2.00	3.20	2.40			1.50	Rigid Base Mounted without Neoprene Pads
							3.60	Rigid Base Mounted with Neoprene Pads

This certification includes the blower coil units and included factory supplied options. This certification only covers accessoriesand options directly mounted to the blower coil units. The blower coil units and applicable options shall be installed per the manufacturer supplied seismic installation instructions. For a list of certified configurations and options please directly contact the manufacturer. Neoprene pads are acceptable are a rigid mounting configuration. This certification excludes all non-factory supplied accessories and options, including but not limited toisolation/restraint devices, other electrical/mechanical components and all connections for electrical, fuel, heating or cooling fluid, or otherpipe/conduit connections and configurations not detailed in the above charts. Flexibility in the connections must be maintained as to not transmitload into the equipment. Design specials are outside the scope of this certification.

IBC CERTIFIED VMC GROUP

VMA-54357-01C (Revision 2)
Issue Date: March 27, 2023
Revision Date: January 15, 2025
Expiration Date: April 30, 2026

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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:
   1300 North Benjamin, Rushville, Indiana 46173

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.

John P. Giuliano, PE
President, VMC Group

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