



VMC GROUP
THE POWER OF TOGETHER™



CERTIFICATE OF COMPLIANCE

SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS



Certification No.

VMA-50927-01C (Revision 1)

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 2018, 2015, 2012, 2009

The following model designations, options, and accessories are included in this certification. Reference report number VMA-50927-01 as issued by The VMC Group for a complete list of certified models, included accessories/options, and certified installation methods.

**Baltimore Aircoil Company; Cooling Towers
Series 3000E with Upgraded Structure; 171 - 1394 Nominal Tons**

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 Nevada at Reno, CERL (US Army Corp. of Engineers) Laboratory, 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	$z/h \leq 1.0$	$z/h = 0.0$
		$S_{DS} \leq 1.460 \text{ g}$	$S_{DS} \leq 1.460 \text{ g}$

Certified Seismic Installation Methods	
Rigid Mounting From Unit Base To Rigid Structure	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 No.	Box Size (ft. x ft. x in.)	Height (in.)	Max. Operating Weight (lbs.)	Nominal Cooling Rating (Tons)
XES3E-8518-05 (G,H,J,K) /S & S3E-8518-05 (L,M) /S	18x8.5x80	104	16850	171-322
XES3E-8518-06 (G,H,J,K) /S & S3E-8518-06 (L,M,N,O) /S	18x8.5x96	120	17710	194-406
XES3E-8518-07 (G,H,J,K,L) /S & S3E-8518-07 (M,N,O,P) /S	18x8.5x112	136	20020	216-484
XES3E-1020-06 (G,H,J,K,L) /S & S3E-1020-06 (M,N,O) /S	20x10x96	120	21330	206-436
XES3E-1020-07 (G,H,J,K,L) /S & S3E-1020-07 (M,N,O,P) /S	20x10x112	136	22700	228-530
XES3E-1222-06 (H,J,K,L) /S & S3E-1222-06 (M,N,O) /S	21.5x12x96	120	26480	279-500
XES3E-1222-07 (J,K,L,M) /S & S3E-1222-07 (N,O,P,Q,R) /S	21.5x12x112	136	28930	354-690
XES3E-1424-07 (J,K,L,M,N) /S & S3E-1424-07 (O,P,Q,R) /S	24x14x112		49500	396-772
XES3E-1222-10 (K,L,M,N,O) /S & S3E-1222-10 (P,Q,R,S) /S	21.5x12x160	186	37350	491-916
XES3E-1222-12 (K,L,M,N,O) /S & S3E-1222-12 (P,Q,R,S) /S	21.5x12x192	218	40290	528-981
XES3E-1222-13 (K,L,M,N,O) /S & S3E-1222-13 (P,Q,R,S) /S	21.5x12x208	234		545-1013
XES3E-1222-14 (L,M,N,O) /S & S3E-1222-14 (P,Q,R,S,T) /S	21.5x12x224	250	42050	645-1147
XES3E-1424-12 (L,M,N,O,P) /S & S3E-1424-12 (Q,R,S,T) /S	24x14x192	218	49500	691-1207
XES3E-1424-13 (L,M,N,O,P) /S & S3E-1424-13 (Q,R,S,T) /S	24x14x208	234	50920	717-1250
XES3E-1424-14 (M,N,O,P) /S & S3E-1424-14 (Q,R,S,T,U,W) /S	24x14x224	250	52580	817-1394

Product Type	Test Criteria	SDS (z/h=0)	SDS (z/h=1)	AFlex-H	ARig-H	AFlex-V	ARig-V	Fp/Wp
Cooling Towers with Baldor fan motors, Moore fans, 8 blades 156 in. Cofimco fans, and 2'-6 1/2" and 3'-6" stainless steel fan cylinder extensions	AC156	1.46	1.46	2.34	1.75	0.97	0.39	3.28
Cooling Towers with Other Subcomponents		1.94	1.94	3.10	2.33	1.30	0.52	4.37

This certification includes cooling tower models as detailed in the above charts. The cooling tower configuration and options shall be a catalogue design and factory supplied. The unit shall be installed and attached to the building structure per the manufacturer's 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, all connections for electrical, fuel, heating or cooling fluid, or other pipe/conduit connections and all non-catalogued, standard options and/or configurations not detailed in the above charts. Flexibility in the connections must be maintained as to not transmit load into the equipment. Design specials are outside the scope of this certification.



VMA-50927-01C (Revision 1)
Issue Date: Friday, August 16, 2019
Revision Date: Tuesday, August 2, 2022
Expiration Date: Sunday, August 31, 2025



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 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:
 - 1162 Holly Hill Rd, Milford, DE 19963
 - 15341 Road 28 1/2, Madera, CA 93638
7. This certification follows the VMC Group's ISO-17065 Scheme.

John P. Giuliano, PE
President, VMC Group



VMA-50927-01C (Revision 1)
Issue Date: Friday, August 16, 2019
Revision Date: Tuesday, August 2, 2022
Expiration Date: Sunday, August 31, 2025

