



**VMC GROUP**  
THE POWER OF TOGETHER™



## CERTIFICATE OF COMPLIANCE

### WIND RESISTANT DESIGN OF MAIN WIND FORCE RESISTING SYSTEMS



Certification No.

**VMA-53922-01C (Revision 05)**

Expiration Date: 01/31/2027

#### Certification Parameters:

The main wind force resisting systems listed on this certificate are CERTIFIED FOR WIND APPLICATIONS in accordance with the following building code<sup>1</sup> releases.

**IBC 2018, IBC 2015**

The following model designations, options, and accessories are included in this certification. Reference report number **VMA-53922-01** as issued by VMC Group for a complete list of certified models, included accessories/options, and certified installation methods.

#### Cummins Thor I & II Enclosures Steel & Aluminum, Weather & Sound Level I, II

The above referenced equipment is **APPROVED** for wind application when properly installed<sup>2</sup>, used as intended, and contains a Wind Certification Label referencing this Certificate of Compliance<sup>3</sup>. 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  $I_p \leq 1.15$ .

Certified Wind Resistant Design Levels			
Certified IBC 2018	Importance $I_p \leq 1.15$ Exposure Categories A-D Risk Categories I-IV	<b>V ≤ 164 mph</b>	<b>V ≤ 121 mph</b>
		V ≤ 73 m/s	V ≤ 54 m/s
		<b>z ≤ 15 ft</b>	<b>z ≤ 500 ft</b>
		z ≤ 5 m	z ≤ 152 m
		<b>Pressure Basis<sup>4</sup></b>	Velocity Pressure = $q_z =$ <i>(Refer to following page for Pressure Coefficients)</i>
			<b>60 lbs/ft<sup>2</sup></b> 2.87 kPa

Certified Wind Resistant Installation Methods
Rigid Mounting From Unit Base To Rigid Structure

**HEADQUARTERS**  
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**Certified Product Table:**

**Thor 1**

Genset	Material	Enclosure Type	Feature Code	Length [ in. ]	Width [ in. ]	Height [ in. ]	Weight – Base Enclosure w/o Lifting Base [ lb. ]
DSHax (QSL9-G2), DQDax (QSL9-G7), DFEx (Qsx 15)	Aluminum	Weather	F203	187.76	86.22	100.00	2,266.00
		Sound Level 1	F204	187.76	86.22	100.00	2,690.60
		Sound Level 2	F205	222.01	86.22	100.00	3,319.80
	Steel	Weather	F200	187.76	86.22	100.00	3,058.00
		Sound Level 1	F201	187.76	86.22	100.00	3,482.60
		Sound Level 2	F202	222.01	86.22	100.00	4,397.80

**Thor 2**

Genset	Material	Enclosure Type	Feature Code	Length [ in. ]	Width [ in. ]	Height [ in. ]	Weight Base Enclosure w/o Lifting Base [ lb. ]
DQCx (QSK 23), DQFx (QST 30)	Aluminum	Weather	F203	269.69	112.24	119.53	4,523.20
		Sound Level 1	F204	303.35	101.61	119.53	8,074.00
		Sound Level 2	F205	314.80	101.61	119.06	8,239.00
	Steel	Weather	F200	256.69	112.24	119.53	6,164.40
		Sound Level 1	F201	303.35	101.61	119.53	10,056.20
		Sound Level 2	F202	314.80	101.61	119.06	11,440.00

**Level Comparison Table:**

IBC		2018			2015		
ASCE		7-16			7-10		
Exposure Category		B	C	D	B	C	D
Velocity <sup>5</sup> (mph)	Z ≤ 15 ft	220	180	164	220	180	164
	Z = 200 ft	220	180	164	220	180	164
	Z ≤ 500 ft	133	125	121	133	125	121

**ASCE 7, Chapter 27 Parameters:**

Internal Pressure Coefficient (GC <sub>pi</sub> )	External Pressure Coefficient (C <sub>p</sub> )	
	+/- 0.18	Windward
Leeward		-0.24
Sidewall		-0.7
Roof		-0.18 to -0.9



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### Notes and Comments:

- The following building codes are addressed under this certification:
  - ASCE 7-10 - Minimum Design Loads for Buildings and Other Structures
  - ASCE 7-16 - Minimum Design Loads for Buildings and Other Structures
  - IBC 2015 – referencing ASCE 7-10
  - IBC 2018 – referencing ASCE 7-16
- Refer to the manufacturer supplied installation drawings for anchor requirements and mounting considerations for wind applications. Required anchor locations, size, style, and load capacities (tension and shear) are specified on the installation drawings. 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 sufficiently designed and approved by the project or building Structural Engineer of Record to withstand the wind anchor loads as defined on the installation drawings. The installing contractor is responsible for observing the installation detailed in the wind installation drawings and the proper installation of all anchors and mounting hardware.
- For this certificate to remain valid, it must correspond to the "Wind Certification Label" found affixed to the unit by the factory. The label ensures the manufacturer built the unit in conformance to the IBC wind design criteria set forth by the Product Certification Agency, The VMC Group, and meets the wind design levels claimed by this certificate.
- The qualified wind design pressure stated is for the horizontal wind pressure for applications utilizing ASCE 7-16, for more detailed ranges of qualified wind design levels, see the report cited on Page 1. The design pressures utilized in the analysis are derived based on ASCE 7-16, Chapter 27, Wind Loads on Buildings: Main Wind Force Resisting System (Directional Procedure).
- Velocities were derived from the design pressure resulting from the design velocity (highlighted in yellow).
- 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 UL or NEMA standards after a wind action.
- This certificate applies to units manufactured at 1400 73rd Avenue N.E. Fridley, MN 55432.

John P. Giuliano, PE  
President, The VMC Group

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