

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION **IEC Certification System for Explosive Atmospheres**

for rules and details of the IECEx Scheme visit www.iecex.com

IECEX QPS 19.0004X Certificate No.:

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Certificate history:

Current Status:

Issue No: 3

Issue 2 (2021-03-11) Issue 1 (2020-03-10) Issue 0 (2019-04-18)

Date of Issue: 2022-06-17

Applicant: Ice Qube Inc.

> 141 Wilson Ave. Greensburg, PA

15601

United States of America

Equipment: Zone 2 Heat Exchanger

Optional accessory:

Type of Protection: "ec"

Marking: Ex ec IIC T6/T5/T4 Gc

Tamb= -40°C to +60°C / +65°C / +70°C / + 75° / +80°C

* Refer to Annex Page for detail.

Approved for issue on behalf of the IECEx

Certification Body:

D, Adams, P.Eng.

Position:

Manager, Hazardous Locations Department [Ex Equipment]

Signature:

(for printed version)

(for printed version)

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 The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

Evaluation Services Inc. 81 Kelfield St Unit 8 Toronto, Ontario M9W 5A3 Canada





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Date of issue: 2022-06-17 Issue No: 3

Manufacturer: Ice Qube Inc.

141 Wilson Ave. Greensburg, PA

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United States of America

Manufacturing locations:

Ice Qube Inc. 141 Wilson Ave. Greensburg, PA

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This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS:

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements

Edition:7.0

IEC 60079-7:2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

Edition:5.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

Quality Assessment Report:

CA/QPS/QAR20.0002/00



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Zone 2 Heat Exchanger Model: IQ675HE-Z2, IQ700HE-Z2, IQ800HE-Z2, IQ900HE-Z2, IQ2200HE-Z2, IQ6100HE-Z2 and IQ10000HE-Z2 are intended to be mounted to an adjacent enclosure. The air re-circulated compartment freely communicates with the adjacent, blowing the conditioned air. The ambient compartment is open to the surrounding atmosphere.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- 1. Read the "Heat Exchanger Operation and Installation".
- 2. "WARNING Potential Electrostatic Charging Hazard-See Instructions"



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 0: Original

Issue 1: link to new QAR

Issue 2: Review update the heat exchanger to the compliance of IEC 60079-7: 2015/AMD 1: 2017.

Issue 3. Added alternate Blowers for use with models of IQ2200HE-Z2, IQ6100HE-Z2, IQ7400HE-Z2 and IQ10000HE-Z2.

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IECEx QPS 19.0004X_3-Annex.pdf



QPS Evaluation Services Inc.

Testing, Certification and Field Evaluation Body

Accredited in Canada, the USA, and Internationally

ANNEX to IECEx QPS 19.0004X Issue No: 3, Date: 2022-06-10

Electrical and T code Rating for Zone 2 Heat Exchanger

Model	Input Voltage	Current (A)	FREQUENCY	Ambient Temperature (T _{amb} = -40°C to				
				+60°C	+65°C	+70°C	+75°C	+80°C
				T Code				
IQ675HE-Z2	24 VDC	1.86	N/A	Т6	T5	T5	*	*
	48 VDC	0.94						
IQ700HE-Z2	24 VDC	0.7	N/A	— Т6	T5	T5	*	*
	48 VDC	0.25						
	120 VAC	0.24	50/60 Hz				T4	T4
	230 VAC	0.13						
IQ800HE-Z2	24 VDC	2.94	N/A	T6	T5	T5	*	*
	48 VDC	1.48						
IQ900HE-Z2	24 VDC	0.66	N/A	Т6	T5	T5	*	*
	48 VDC	0.42						
	120 VAC	1.00	50/60 Hz				T4	T4
	230 VAC	0.50						
IQ2200HE-Z2	24 VDC	7.00	N/A	Т6	T5	T5	T5	*
	48 VDC	4.00						
	120 VAC	2.80	50/60 Hz			T5	T4	T4
	230 VAC	0.96						
IQ6100HE-Z2	24 VDC	8.82	N/A	- Т6	T5	*	*	*
	48 VDC	5.42						
	120 VAC	3.70	50/60 Hz		*	*	*	*
	230 VAC	1.80						
IQ7400HE-Z2	24 VDC	8.82	N/A	Т6	T5	*	*	*
	48 VDC	5.42						
	120 VAC	3.70	50/60 Hz		*	*	*	*
	230 VAC	1.80						
IQ10000HE-Z2	24 VDC	10.82	N/A	Т6	T5	*	*	*
	48 VDC	5.45						
	120 VAC	5.02	50/60 Hz		*	*	*	*
	230 VAC	1.52						

^{*} Corresponding models are not suitable at this ambient.