IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.:	IECEx ITS 15.0018X	Issue No: 0	Certificate history: Issue No. 0 (2015-07-13)
Status:	**Current**	Page 1 of 3	
Date of Issue:	**2015-07-13**		

Applicant:
Chromalox Inc
2150 N Rulon White Blvd,
Ogden,
UT 84404
United States of America

Electrical Apparatus: **CCX Cast Block Heater**

Optional accessory:

Type of Protection: **Ex d e**

Marking:

IECEx ITS 15.0018X

Ex d e IIC T3 or T2 (see schedule) Gb Ta -20°C to +60°C

Approved for issue on behalf of the IECEx Certification Body: V K Varma

Position: Certification Officer

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Intertek Testing & Certification Limited
ITS House, Cleeve Road,
Leatherhead,
Surrey, KT22 7SB
United Kingdom

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Manufacturer:	**Chromalox Inc** 2150 N Rulon White Blvd, Ogden, UT 84404 **United States of America**	
Additional Manufacturing location(s):		

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 electrical apparatus 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-7 : 2006-07 Edition:4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical 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 Report:

GB/ITS/ExTR15.0016/00

Quality Assessment Report:

GB/ITS/QAR09.0002/03

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Chromalox CCX Cast Block Heater is based on the CFP family of heaters, certified in certificate numbers IECEx ITS 03.0007X for the CFP8 and IECEx ITS 03.0008 for CFP JB (Junction Box) sensor enclosure. The terminal housings are provided by the CFP8 model which is drilled to accept metal sheathed heating element. These elements pass through flameproof glands into the base. This version incorporates an Aluminium block which is cast around the heating elements. The process medium flows through the cast block inlet and outlet connections and the process medium is in turn heated. A stand off is provided to limit the temperatures in the CFP enclosure. If the stand off is insulated then this thickness is added to the overall stand off dimension and not incorporated. The following table describes the parameters which are applicable:

Orientation	**Stand off height** (not including insulation thickness)	**Ambient**	**Temperature Class**
Vertically Mounted	120 mm	-20°C to +40°C	T3
Vertically Mounted	130 mm	-20°C to +60°C	T3
Horizontally Mounted	120 mm	-20°C to +40°C	T3
Horizontally Mounted	130 mm	-20°C to +60°C	T2

T o avoid the heater exceeding the stated T-Class, three thermal trips are provided. The temperature protection thermocouples (or alternatively RTDs) are fitted by the manufacturer. The types of temperature sensors (RTD, Thermocouple or Cut-Out) are the same as for the CFP range. The type that is selected is dependant on what the end user's control system requires. A third thermowell is provided for either process control or overtemperature control If one or two of the temperatures sensors were to fail in the field then the set points of the remaining sensors would prevent an overtemperature situation from occurring until maintenance can be conducted

CONDITIONS OF CERTIFICATION: YES as shown below:

1. Thermal trips are used to protect against exceeding the temperature class of the equipment. The following table provides guidance on the selection of temperatures at which the heater should de-activate so that the temperature class is not exceeded.

Orientation	**Thermal Trip 1**	**Thermal Trip 2**	**Ambient**	**Temperature Class**
Vertically Mounted	135.8 °C	145.4 °C	-20°C to +40°C	T3
Vertically Mounted	155.8 °C	164.4 °C	-20°C to +60°C	T3
Horizontally Mounted	134.1°C	159.5°C	-20°C to +40°C	T3
Horizontally Mounted	254.1°C	279.5°C	-20°C to +60°C	T2

It is the user's responsibility to determine what action is taken in the event of over temperature condition

2. It shall be ensured that the system is primed and full of fluid prior to switching the power on.