



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.: issue No.:

Status:

Date of Issue: Page 1 of 3

Applicant: **Meech Static Eliminators Limited**
2 Network Point,
Range Road,
Witney,
Oxfordshire,
OX29 0YN
United Kingdom

Equipment: **Vortex Cabinet Cooler**
Optional accessory:

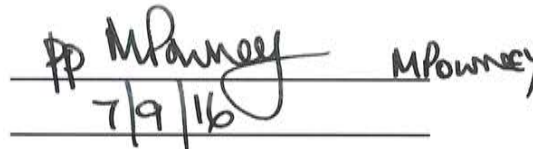
Type of Protection: **Non-electrical**

Marking: **Ex h IIC T4 Gb Ta -10°C to + 55°C**

Approved for issue on behalf of the IECEx Certification Body: **R S Sinclair**

Position: **Technical Manager**

Signature:
(for printed version)


7/9/16

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](http://www.iecex.com).

Certificate issued by:

SGS Baseefa Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire, SK17 9RZ
United Kingdom





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Certificate No.: IECEX BAS 16.0087X

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Manufacturer: **Meech Static Eliminators Limited**
2 Network Point,
Range Road,
Witney,
Oxfordshire,
OX29 0YN
United Kingdom

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:

ISO 80079-36 : 2016 Edition: 1.0	Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic methods and requirements
ISO 80079-37 : 2016 Edition: 1.0	Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres - Non electrical type of protection constructional safety "c", control of ignition source "b", liquid immersion "k"

*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/BAS/ExTR16.0213/00](#)

Quality Assessment Report:

[GB/BAS/QAR16.0014/00](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Meech Cabinet coolers are compressed air powered devices that are intended to cool electronic/electrical enclosures that are located in Zone 1 areas. The products will be classified as Group II equipment.

There are no electric/electronic components in these products they are entirely non-electrical. The cooling that they produce is driven by an internal vortex tube. A vortex tube is a compressed air powered device that has no moving parts. From a high pressure clean and dry compressed air source, the vortex tube creates a cold air stream and a hot air stream. The vortex tube's cold air stream is directed inside the (customer's) protected enclosure while the hot air stream is exhausted outside of the Meech Cabinet Cooler via two side holes to the ambient environment. The Meech Cabinet Cooler can be mounted directly on the top, side or underneath of the enclosure to be cooled via a 26mm diameter hole. An 'O' ring seal between the Meech Cabinet Cooler and the enclosure to be cooled maintains a seal at this interface. The cold airstream is directed inside the enclosure through the bottom exit hole. A nitrile bladder relief valve is located at the base of the vortex. This ensures that the pressure inside the enclosure to be cooled cannot exceed approximately 0.0199 bar.

The main ignition source from the Cabinet Cooler is from the hot air exhaust temperatures that it can develop. The temperature of the hot air exhaust is dependent on the temperature and the pressure of the compressed air that is supplied to the product. When the compressed air pressure is limited to a maximum of 5.5 bar (80 psig) and a maximum inlet air temperature of 55°C, then the hot exhaust air temperature and corresponding surface temperatures on or inside the product will not exceed 135°C. This corresponds to a temperature classification of T4. It is imperative that the compressed air supply conditions be stated and adhered to.

The Meech Cabinet Cooler is primarily constructed from stainless steel. Internally there is a steel spring that supports the silencer foam and locates on to a brass sleeve. There are four interchangeable plastic generators available that offer different rates of cooling ability.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The user shall ensure that the certification of any enclosure onto which this is installed, is not compromised by the installation or operation of this device.
2. The equipment shall be suitably earthed (grounded) prior to operation. Earth continuity shall be maintained between the equipment and the enclosure to which it is installed on.
3. Inlet pressure shall not exceed 5.5 Bar (80 PSI).
4. Inlet air temperature shall not exceed 55°C.
5. When installed, consideration shall be given to the guidance given in PD IEC/TS 60079-32-1 'Explosive atmospheres - Electrostatic hazards, guidance'.
6. The cold fraction adjustment valve must not be altered and remain at 2.5 turns open.