



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

Certificate No.: **IECEX EXV 23.0008X** Page 1 of 4 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2023-09-06
Applicant: **Cairn Safety Technology**
3 Telford Square
Livingston EH54 5PQ
United Kingdom
Equipment: **Cocoon habitat**
Optional accessory:
Type of Protection: **Pressurised room "p"**
Marking: **Ex pb IIB/IIB+H2 T4 Gb**
 $T_{amb} -40^{\circ}\text{C}/-20^{\circ}\text{C}$ to $+40^{\circ}\text{C}/+50^{\circ}\text{C}/+55^{\circ}\text{C}$
Gas group and ambient temperature marked is dependent upon the certified parts used in the control system.

Approved for issue on behalf of the IECEx
Certification Body:

Sean Clarke CEng MSc MIET

Position:

Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

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.
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Certificate issued by:

ExVeritas Limited
Units 16-18 Abenbury Way
Wrexham Ind. Est.
Wrexham LL 139UZ
United Kingdom





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Manufacturer: **Cairn Safety Technology**
3 Telford Square
Livingston EH54 5PQ
United Kingdom

Manufacturing locations: **Cairn Safety Technology**
3 Telford Square
Livingston EH54 5PQ
United Kingdom

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 60079-13:2017](#) Explosive atmospheres - Part 13: Equipment protection by pressurized room "p" and artificially ventilated room "v"
Edition:2.0

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 Report:

[GB/EXV/ExTR23.0043/00](#)

Quality Assessment Report:

[GB/EXV/QAR23.0005/00](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Cairn Cocoon Habitat with Einstein Control System is a transportable and modular pressurised room designed to allow tasks which include potential ignition sources to be carried out safely in a hazardous area, these tasks include work which would be carried out under a spark potential or hot work permit.

The Cocoon Habitat is a panel based construction with access via a single door or an airlock door. The Einstein Control system is fitted with a flexible ducting to allow air to be drawn from outwith the hazardous area and provide purge and pressurisation of the habitat, providing a minimum of 5 habitat volume changes per hour.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Equipment must only be installed and operated by personnel trained on the equipment. Equipment must be installed in accordance with user instructions, habitat checklist requirements and single door procedure where applicable.
2. Habitats must be constructed such that no dead air spaces are created where gases may accumulate. Inlets and outlets are to be located and arranged such that the clean air flow is evenly distributed considering the density of gases and vapours that may be present before and during operation, including internal sources of release such as acetylene.
3. Hot work shall be arranged and conducted as to reduce the likelihood of generated sparks or hot particles from contacting door, duct, or penetration panels. Welding curtains/blankets/screens may be used to aid in hot particles management.
4. Habitat panels and ducts for clean air supply and exhaust should be leak free and protected from mechanical damage. Parts must be inspected prior to each use.
5. Equipment inside the room not rated for the external EPL must be powered via the Einstein Control System.
6. The exhaust duct, and single door if used, shall be guarded from high wind speeds by use of windbreaks or other means. In addition, when a single door is used, consideration should be given when wind speeds may exceed the minimum required 0.3 m/s face velocity of the door, which may cause the infiltration of the external explosive atmosphere.
7. When Venturi extraction is used, it shall be positioned away from walls of the habitat to prevent the external atmosphere being drawn in - See manual for more details.
8. No non-ventilated enclosures containing electrical equipment and exceeding 5% of the total habitat volume shall be present within the habitat.
9. In the case of system failure, all hot parts shall immediately, and before opening of the habitat door, be quenched. Water or other appropriate means based on application to quickly cool hot surfaces is to be readily available to prevent an ignition in the event the pressurisation or ventilation system fails.
10. The use of the supplied gas detector and location of the gas detector must be deemed sufficient based upon end-user process risk evaluation. Guidance can be found in IEC 60079-29.
11. Discharge of the room ventilation system shall be positioned in open air and free from any constructional features which may allow for discharged gases to accumulate.
12. The inlet shall be suitably located such that the air supplied to the habitat is from a non-hazardous area.
13. The end user must ensure that the indicators and operators on the lid of the Ex d control box are suitably protected from the risk of external impacts when the equipment is in use.
14. All certificate conditions for the individual certified parts must be met in addition to the requirements of this certificate.



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Additional information:

Technical Documents:

Title:	Drawing No.:	Rev. Level:	Date:
Cairn Cocoon Habitat - EX GA Sheets 1 to 6	CST-DWG-0001	00	01-09-22
Cairn Cocoon Habitat User Guide	CST-UK-OPS-CM-2022	1	04-11-22
Cairn Cocoon Habitat Checklist	CST-UK-OPS-CS-2022	1	-