



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

Certificate No.: IECEX SIR 09.0132X

Issue No: 3

Certificate history:

Status: **Current**

Issue No. 3 (2017-08-15)

Issue No. 2 (2016-11-30)

Date of Issue: **2017-08-15**

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Issue No. 1 (2016-01-20)

Issue No. 0 (2010-03-05)

Applicant: **Peppers Cable Glands Ltd**  
Stanhope Road  
Camberley  
Surrey  
GU15 3BT  
**United Kingdom**

Equipment: **ACDP Breather Drains**

Optional accessory:

Type of Protection: **Increased Safety and Dust**

Marking:

Ex eb IIC Gb  
Ex eb I Mb  
Ex ta III C Da IP66

Approved for issue on behalf of the IECEX  
Certification Body:

C Ellaby


Position:

Deputy Certification Manager

Signature:

(for printed version)

Date:

  
2017-08-15

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:

**SIRA Certification Service**  
CSA Group  
Unit 6, Hawarden Industrial Park  
Hawarden, Deeside, CH5 3US  
United Kingdom

**sira**  
CERTIFICATION





# IECEX Certificate of Conformity

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Date of Issue: 2017-08-15 Page 2 of 5  
Manufacturer: **Peppers Cable Glands Ltd.**  
Stanhope Road  
Camberley  
Surrey  
GU15 3BT  
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:

**IEC 60079-0 : 2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0  
**IEC 60079-31 : 2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2  
**IEC 60079-7 : 2015** Explosive atmospheres – Part 7: Equipment protection by increased safety "e"  
Edition:5.0

*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/SIR/ExTR10.0032/00](#) [GB/SIR/ExTR16.0001/00](#) [GB/SIR/ExTR16.0303/00](#)  
[GB/SIR/ExTR17.0161/00](#)

#### Quality Assessment Report:

[GB/SIR/QAR06.0018/01](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The breather drain plug is designed to allow moisture emission from Ex e and Ex ta enclosures and to allow air within the enclosure to breathe with the surrounding atmosphere. The device body may be manufactured from aluminium, brass or stainless steel with a 10 mm long metric or NPT thread. The body is machined to house a sintered bronze filter. Drainage channels through the body allow for the passage of moisture through the filter.

The device may be screwed into the wall of an enclosure or into a through hole, being secured by a castellated locknut.

Refer to the Annexe for Design Options.

### SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The breather drains are only suitable for bottom entry applications within associated Ex eb and Ex ta enclosures.
2. The products are approved for a temperature range at their point of mounting based upon the interface seal and material combinations of construction:

No seal fitted	(-100°C to +400°C)
Nitrile O-ring	(-30°C to +100°C)
Neoprene O-ring	(-35°C to +90°C)
Silicone O-ring	(-60°C to +200°C)
Fluorosilicone O-ring	(-55°C to +200°C)
Viton O-ring	(-20°C to +180°C)
EPDM O-ring	(-50°C to +110°C)

When no seal is fitted and the breather drain is installed in an increased safety (Ex e) enclosure, the user shall ensure that a minimum degree of protection IP54 is maintained.

3. When used in explosive dust atmospheres, the breather drain shall be fitted with sealing a ring except when installed into a tapered threaded hole. In this case the short threaded versions 10 mm (1/4" NPT, 3/8" NPT) or 13 mm (1/2" NPT, 3/4" NPT) shall be used to ensure that a minimum of 3 full threads of contact will be maintained. This is in accordance with clause 5.3.2 of IEC 60079-31: 2013 Ed 2.
4. The M12 and 1/4" NPT threaded breather drains made of brass and intended for mining (Group I) applications shall be installed in areas where they are subject to low risk of mechanical impact or are protected from mechanical damage.



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**EQUIPMENT (continued):**

**Conditions of manufacture**

**The Manufacturer shall comply with the following:**

1. Aluminium devices shall not be marked with any information indicating that they are suitable for Group I use.
2. The filter discs shall be mechanically press fitted into the body component ensuring an interference fit is maintained.



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## DETAILS OF CERTIFICATE CHANGES (for Issues 1 and above):

**This issue recognises the following changes; refer to the certificate annex to view a comprehensive history:**

- i. To permit the use of a replacement sintered bronze filter within ACDP (short and long thread version) breather drain sizes M20, M25, M32, ½" NPT and ¾" NPT. Component part reference ACBSD.
- ii. To permit a reduction in the diametrical tolerance of the sintered bronze filter, within ACDP (short and long thread version) breather drains M12, M16, ¼" NPT and 3/8" NPT, having their bore diameter reduced to accommodate. Component part reference ACBSD-2.
- iii. Drawing PCG/MATS/AL was updated to clearly define the grade and temper of materials used in manufacture.

### Annex:

[IECEX SIR 09.0132X Iss3 Annexe.pdf](#)

**Annexe to:** IECEx SIR 09.0132X Issue 3

**Applicant:** Peppers Cable Glands Ltd

**Apparatus:** ACDP Breather Drains



The parallel threaded Breather Drains may be fitted with or without an O-ring seal, refer to the annexe for approved seals. When fitted with an O-ring seal and screwed into the wall of an enclosure or into a through hole, being secured with a castellated locknut, they will maintain IP66 degree of protection

Tapered threaded Breather Drain may be fitted with or without an O-ring seal, see below for approved seals. When fitted with an O-ring seal and secured into a through hole, they will maintain IP66 degree of protection.

### Design Options

Extended Thread Length:

The breather drain plug may be machined with a long thread. Long threads have two additional drainage channels machined into the thread.

The breather drain may have the following threads:		
M12	M25	3/8" NPT
M16	M32	1/2" NPT
M20		1/4" or 3/4" NPT

Alternatively the breather drains may be provided with the following, but not limited to, alternative thread forms of an equivalent size:

NPSM: ANSI /ASME B1.20.1: 1983

BSPT: BS21:1995 (ISO 7/1; BE EN 10226-1:2004)

BSPP: BS EN ISO 228-1: 2003; BS EN ISO 228-1:2003

PG: DIN 40430: 1971

'O' ring seals materials fitted to male thread forms may be provided in the following materials to suit the application:		
Nitrile O-ring		Fluorosilicone O-ring
Neoprene O-ring		Viton O-ring
Silicone O-ring		EPDM O-ring

### Materials of Manufacture and Marking:

The breather drain plugs may be manufactured from the following materials:

Brass grade CW614N (CuZn 38Pb4)/ CZ121 4Pb

Brass grade Ecobrass C69300/ C87850

Stainless Steel 1.4401/ 316 S31

Stainless Steel 1.4404/ 316 S11

Stainless Steel 1.4301/ 304

Aluminium AW6082/ AW 6262/ 6082TF

Aluminium B21.1.90 AA6262T9/ 6262T9

The products may additionally be metallic plated with either: Nickel, Zinc or Anodised (0.008 mm thick max.) to suit the application.

**Annexe to:** IECEx SIR 09.0132X Issue 3  
**Applicant:** Peppers Cable Glands Ltd  
**Apparatus:** ACDP Breather Drains



**Product Type Ref:**

The product type is derived from the following options:

**A-B-C-D-E-F-G**

**A Product Type**

ACDP = Breather drain

**B IP Seal code**

0	=	No seal fitted	(-100°C to +400°C)
1	=	Nitrile O-ring	(-30°C to +100°C)
2	=	Neoprene O-ring	(-35°C to +90°C)
3	=	Silicone O-ring	(-60°C to +200°C)
4	=	Fluorosilicone O-ring	(-55°C to +200°C)
5	=	Viton O-ring	(-20°C to +180°C)
6	=	EPDM O-ring	(-50°C to +110°C)

**C Material of manufacture**

A	=	Aluminium
B	=	Brass
S	=	Stainless Steel

**D Certification order code**

**E Plating**

OO	=	Not plated
NP	=	Nickel Plated
ZP	=	Zinc
AN	=	Anodized

**F Thread Size**

Metric	=	M12/M16/M20/ M25/ M32
NPT	=	1/4" / 3/8" / 1/2" / 3/4"

**G Lock nut**

X	=	No lock nut
S	=	Stainless Steel Option

**Details Of Certificate Changes (for issues 1 and above)**

**Issue 1** – this Issue introduced the following changes:

- i. The model code 'B' and 'C' designations have swapped their design options that they refer to; The description was amended accordingly

**A-B-C-D-E-F-G**

**From:**

B = Material of manufacture  
and  
C = IP Seal code

**To:**

B = IP Seal code  
and  
C = Material of manufacture

**Date:** 15 August 2017

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**Form 9530 Issue 1**

**Sira Certification Service**

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**Annexe to:** IECEx SIR 09.0132X Issue 3  
**Applicant:** Peppers Cable Glands Ltd  
**Apparatus:** ACDP Breather Drains



- ii. The option to fit an alternative Stainless Steel sinter (filter) within all sizes as indicted by the introduction of following part model code 'S' designation as indicated below.

*A-B-C-D-E-F-S*

- iii. The introduction of the following metric and NPT spigot sizes indicted by their type and size designations in the following model code.

*A-B-C-D-E-M12-G*  
*A-B-C-D-E-1/4" NPT-G*  
*A-B-C-D-E-M16-G*  
*A-B-C-D-E-3/8" NPT-G*

- iv. Replacement of the tin plating option model code 'TP' designation with anodize plating option model code 'AN' designation as indicated below.

**From:**  
*A-B-C-D-TP-F-S*

**To:**  
*A-B-C-D-AN-F-S*

- v. Marking the products suitable for level of protection "ta" (EPL "Da") was approved
- vi. The recognition of the following minor drawing modifications; these amendments are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety:
- Typographical additions/clarifications/corrections
  - Minor dimensional changes

Along with the introduction of the following additional schedule approval drawings omitted in error under the original certification:

**PCG/ACFD**  
**PCG/MATS/SB**  
**PCG/MATS/AL**  
**PCG/ETOR**

- vii. Reassessment of the breather drain approval as Ex Equipment certification from Ex Component certification, the template was amended accordingly
- viii. Recognition of the following materials of manufacturer for the breather drain body being;

**Removed:**  
Brass grade CW614 (CuZn 39Pb3)/ CZ121 3Pb  
Brass grade CW617N (CuZn 40Pb2)/ CZ122  
Stainless Steel 1.4305/ 303

**Added**  
Ecobrass C69300

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**Form 9530 Issue 1**

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**Annexe to:** IECEx SIR 09.0132X Issue 3  
**Applicant:** Peppers Cable Glands Ltd  
**Apparatus:** ACDP Breather Drains

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- ix. The removal of the threaded drainage holes and slots from the short threaded NPT versions along with an increase in the thread length of the 1/2" NPT and 3/4" NPT versions from 10mm to 13mm.
- x. An IPX6 rating was approved for the short threaded NPT versions.
- xi. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2007 Ed.5, IEC 60079-7:2006 Ed. 4 and IEC 60079-31:2008 Ed.1, were replaced by IEC 60079-0:2011 Ed.6, IEC 60079-7:2015 Ed. 5 and IEC 60079-31:2013 Ed.2, the Schedule of Limitations were changed to Conditions of Certification amended and the markings were amended to recognise the new standards.

**Issue 2** – this Issue introduced the following changes:

- i. To permit the reduction of the bore diameters for each size of ACDP range of breather drains by 0.2 mm.

**Issue 3** – this Issue introduced the following changes:

- i. To permit the use of a replacement sintered bronze filter within ACDP (short and long thread version) breather drain sizes M20, M25, M32, 1/2" NPT and 3/4" NPT. Component part reference ACBSD.
- ii. To permit a reduction in the diametrical tolerance of the sintered bronze filter, within ACDP (short and long thread version) breather drains M12, M16, 1/4" NPT and 3/8" NPT, having their bore diameter reduced to accommodate. Component part reference ACBSD-2.
- iii. Drawing PCG/MATS/AL was updated to clearly define the grade and temper of materials used in manufacture.

**Date:** 15 August 2017

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**Form 9530 Issue 1**

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