**1** # UK-TYPE EXAMINATION CERTIFICATE

**2** **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres**
**UKSI 2016:1107 (as amended) – Schedule 3A, Part 1**

**3** UK-Type Examination Certificate Number: **BAS21UKEX0497X Issue 0**

**4** Product: **BTV Range of Self-Regulating Trace Heating Systems**

**5** Manufacturer: **Chemelex LLC**

**6** Address: **899 Broadway Street, CA, 94063-3104 United States of America**

**7** This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

**8** SGS United Kingdom Ltd. (formerly SGS Baseefa Ltd.), Approved Body number 1180, in accordance with Regulations 42 and 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in a confidential report identified in the revision table at item 20.

**9** Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN IEC 60079-0:2018** **EN IEC 60079-7:2015+A1:2018** **EN 60079-18:2015+A1:2017**
**EN 60079-30-1:2017** **EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

**10** If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

**11** This UK-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

**12** The marking of the product shall include the following:

**Ex II 2 GD Ex 60079-30-1 eb IIC T6 Gb or Ex 60079-30-1 eb mb IIC T6 Gb Tmin -60°C**
**Ex 60079-30-1 tb IIIC T80°C Db or Ex 60079-30-1 mb tb IIIC T80°C Db**

SGS Customer Reference No. **865** Project File No. **23/0333**

This document is issued by the Company subject to its General Conditions for Certification Services accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and the Supplementary Terms and Conditions accessible at http://www.sgs.com/SGSBaseefa/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. It does not necessarily indicate that the equipment may be used in particular industries or circumstances. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, schedule included, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful, and offenders may be prosecuted to the fullest extent of the law.

**SGS United Kingdom Limited**
**(formerly SGS Baseefa Ltd.)**
Rockhead Business Park, Staden Lane,
Buxton, Derbyshire SK17 9RZ
Telephone +44 (0) 1298 766600 Fax +44 (0) 1298 766601
e-mail sgs.buxton@sgs.com web site www.sgs.co.uk/sgsbaseefa
Registered in England No. 1193985
Registered address: Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN

UKAS PRODUCT CERTIFICATION
0191

D BREARLEY
LEAD CERTIFICATION ENGINEER
On behalf of SGS United Kingdom Limited

13 # Schedule

14 ## Certificate Number BAS21UKEX0497X – Issue 0

### 15 Description of Product

The BTV Range of Self-Regulating Trace Heating Systems is of the parallel circuit self-regulating type, rated at up to 277V, with power output up to 33W/m (10W/ft). The units have a maximum self-limiting temperature of 80°C.

Each trace heating system comprises:

- the active heating cable.
- an end seal for terminating the remote end of the unit.
- a cable gland for connecting the powered end of the unit to a suitable terminal enclosure, or alternative integrated power connection systems.

The active heating cable comprises two stranded copper conductors around which is extruded a semi-conductive core material. This core material increases in resistance with increasing temperature and gives the cable its self-limiting property. This semi conductive core with embedded conductors forms the active part of the heating cable. An extruded layer of fluoropolymer serves to insulate the semi conductive core from the conductive covering, covering the active heater. A protective anti-corrosion fluoropolymer sheath may be extruded over the conductive covering.

The declared maximum withstand temperature for the range is 85°C and the minimum installation temperature is -60°C.

CABLE ACCESSORIES

END SEALS

The end seals for terminating the remote end of the unit may be the following types:

Types E-100-L or E-100, which are mechanical end seals incorporating an end cap which is filled with silicone grease sealant covered by certificates Sira14ATEX3015X and PTB09ATEX1060U.

Types E-100-L-A or E-100-A, which are mechanical end seals incorporating an end cap which is filled with silicone grease sealant.

A Raychem Type E-20 heat shrink end seal kit.

Type E-150 mechanical end seals, covered by certificate DEKRA20ATEX0011U.

SPLICES AND JOINTS

The following splicing and jointing arrangements are provided:

A Raychem Type S-20 heat shrink splice kit for connecting lengths of active heating cable.

A Raychem T-100 tee connection system, certificate PTB20ATEX1008U, for connecting up to three heater cables.

Type S-150 mechanical splice kit, covered by certificate DEKRA20ATEX0011U.

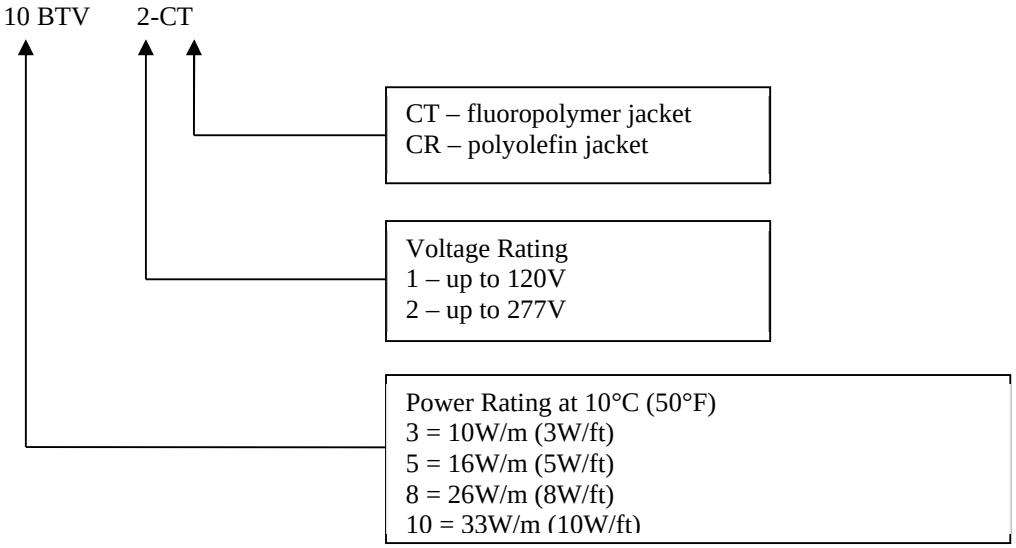
POWER CONNECTIONS

Power connection may be achieved by the following means:

| Connection Type | ATEX Certificate |
|---|---|
| JBM-100 | PTB20ATEX1008U |
| JBS-100 | PTB20ATEX1008U |
| JBU-100 | PTB20ATEX1008U |
| C-150-E | DEKRA20ATEX0011U |
| C25-21 Connection Kit | Baseefa16ATEX0037U |
| C25-100 Connection Kit | Baseefa16ATEX0038U |
| C25-100-Metal / C3/4-100-Metal / C25-100-Metal-NP / C3/4-100-Metal-NP / C25-100-Metal-SS Kits | Baseefa16ATEX0039U |

The C25-100-Metal / C3/4-100-Metal / C25-100-Metal-NP / C3/4-100-Metal-NP / C25-100-Metal-SS Kits include M25 or ¾ NPT gland to Sira01ATEX1270X and core sealer to Baseefa15ATEX0194U.

A number of power levels and voltages, up to the maximum specified, are included in the range. They are identified in the following manner:




Any of the products in the range may be considered as part of a stabilised design system. In such a system the design is based upon the use of nVent proprietary software Trace calc Pro. The algorithm defined in this software may be used in additional design software.

The minimum bending radii for BTV trace heating cable at specific temperatures are shown in the table below:

| **Temperature, T (°C)** | **Minimum Bending Radius (mm)** |
|---|---|
| $-60 \leq T < -20$ | 35 |
| $-20 \leq T < -10$ | 30 |
| $-10 \leq T < 0$ | 25 |
| $0 \leq T < +10$ | 20 |
| $T \geq +10$ | 12 |

**16 Report Number**

See Item 20 – Certificate History

## 17 Specific Conditions of Use

1. The following limiting temperatures for the heat shrink end seals and splices shall not be exceeded:

   +110°C for the S-20 and E-20
   +150°C for the C-150-E, S-150 and E-150

2. The end seals, splices and power connections have the following associated ambient temperatures:

   -60°C to +56°C for the E-20 and S-20
   -55°C to +56°C for the T-100, JBM-100, JBS-100, JBU-100, and E-100
   -40°C to +56°C for the JBS-100-L, JBM-100-L, and JBU-100-L
   -55°C to +55°C for the C-150-E, S-150 and E-150
   -40°C to +40°C for the E-100-L
   -55°C to +110°C for the C25-21 and C25-100
   -60°C to +180°C for the C25-100-Metal / C3/4-100-Metal / C25-100-Metal-NP / C3/4-100-Metal-NP / C25-100-Metal-SS

3. The assembly of glands, splices and end terminations shall be carried out in accordance with the manufacturing instructions

4. The heating element supply circuit must include an electrical protection device in conformity with Clause 4.4 of EN 60079-30-1.

5. The minimum installation temperature is -60°C. The minimum bending radii at specific temperatures for the Type BTV units are shown in the table in the equipment description.

6. The supply to the heating unit must be terminated in a suitably certified terminal enclosure.

7. The minimum installation temperature for E-20 and S-20, end seal and splice is -20°C.

8. The installer is to carry out a dielectric strength test on Ex equipment in which the C25-21, C25-100 and C25-100-Metal / C3/4-100-Metal / C25-100-Metal-NP / C3/4-100-Metal-NP / C25-100-Metal-SS connection kit is fitted. No dielectric breakdown shall occur. (Alternatively, an insulation resistance test may be undertaken in accordance with EN 60079-30-2).

## 18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

| Clause | Subject |
|---|---|
| 13 | LVD type requirements |
| 14 | Overloading of equipment (protection relays, etc.) |
| 21 (1) | External effects |
| 21 (2) | Aggressive substances, etc. |

## 19 Drawings and Documents

Other than for Issue 0, Drawings and Documents that are introduced at a new edition of the certificate are marked with an asterisk symbol:

| Number | Sheet | Issue | Date | Description |
|---|---|---|---|---|
| 906794-A | 1 of 1 | AD | 9/17/2025 | Generic ATEX and IECEx Print Dwg for BTV-CT, QTVR-CT, XTV-CT, KTV-CT Heating Cables |
| SGS20ATEX0048X | | | | |

* This drawing is common to IECEx BAS 20.0011X, IECEx BAS 20.0012X, IECEx BAS 20.0013X, IECEx BAS 20.0014X, SGS20ATEX0048X, SGS20ATEX0049X, SGS20ATEX0050X, SGS20ATEX0051X, BAS21UKEX0497X, BAS21UKEX0498X, BAS21UKEX0498X, BAS21UKEX0500X and are held with IECEx BAS 20.0011X.

## 20 Certificate History

| Certificate No. | Date | Comments |
|---|---|---|
| BAS21UKEX0497X<br>Issue 0 | 11 December 2025 | **Prime Certificate**<br>**Report Number: 23(C)0333** **Project Number: 23/0333**<br>**Original issue of the certificate** |
| For drawings applicable to each issue, see original of that issue. | | |