

### UNITED KINGDOM CONFORMITY ASSESSMENT

UK TYPE EXAMINATION CERTIFICATE

2 Equipment Intended for use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) - Schedule 3A, Part 1

3 Certificate Number: CSAE 22UKEX1237X Issue: 0

4 Product: 210-3311 AirChek 3000 Air Sampling Pump

5 Manufacturer: SKC Limited

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6 Address: 11 Sunrise Park

**Higher Shaftsbury Road** 

Blandford Forum

Dorset DT11 8ST

UK

- 7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- CSA Group Testing UK Limited, Approved Body number 0518, in accordance with Regulation 42 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 the confidential reports listed in Section 14.2.
- 9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-11:2012

Except in respect of those requirements listed at Section 16 of the schedule to this certificate. The above standards may not appear on the UKAS Scope of Accreditation, but have been added through flexible scope of accreditation, which is available on request.

- If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use identified in the schedule to this certificate.
- 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 this product shall be in accordance with Regulation 41 and include the following:

 $\langle \varepsilon_x \rangle$ 

Ex ia I Ma

 $Ta = 0^{\circ}C \le Ta \le +40^{\circ}C$ 

 $\langle \epsilon_{\rm x} \rangle$ 

Ex ia IIC T4 Ga  $Ta = 0^{\circ}C \le Ta \le +40^{\circ}C$ 

 $\langle \epsilon_x \rangle$ 

II 1D

Ex ia IIIC T120°C Da Ta = 0°C $\leq$ Ta $\leq$ +40°C



Title: Director of Operations





### **SCHEDULE**

### **UK TYPE EXAMINATION CERTIFICATE**

CSAE 22UKEX1237X Issue 0

### 13 DESCRIPTION OF PRODUCT

The 210-3311 AirChek 3000 Air Sampling Pump is a portable device designed to pump air at a constant flow rate. When used in conjunction with a suitable air sampling device and collection substrate, it is used to determine the amount of particulate and/or gaseous contaminants in a given volume of air. The equipment comprises a removable, rechargeable, encapsulated battery pack, a battery operated, motor driven, pump mechanism and an electronic circuit to control the rotational speed of the motor to maintain a constant air flow rate. The electronic circuit also provides a low battery shutdown function, detection of blockage of the airflow and control and monitoring of the duration of the sampling period. This circuit also provides a serial data interface port providing connection to a computer in the safe area for programming of the pump air flow rate and sample period duration, and retrieval of logged sample performance data. The motor, pump mechanism and electronic circuit are housed in a plastic enclosure and may use different filter covers/pump inlet arrangements to suit the application.

#### **Incorporated** amendments

The product description includes the following applicable amendments from the previous supporting assessments. Only amendments directly applicable to UKCA certification have been included in this list. The amendments are numbered to include a reference to the variation at which these were introduced.

#### Amendment 1

- i. The introduction of Special Condition for Safe Use 15.6 relating to the Liquid Crystal Display.
- ii. Corrections and modifications of the circuit capacitance were approved.

# Amendment 2

- i. The value of safety resistor R39 was reduced from a minimum of 71R to 37R.
- ii. A non-safety resistor was introduced in series with the pump.

#### Amendment 3

The introduction of alternative TPE plastic materials that are used for the product case overmould.

### Amendment 4

i. To introduce an alternative epoxy resin, Robnor Resins PX804C-1, for the encapsulation of the battery pack.

## 14 DESCRIPTIVE DOCUMENTS

## 14.1 Drawings

Refer to Certificate Annexe.

## 14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	05 September 2022	R80125206A	The release of the prime certificate.

- 15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)
- 15.1 Use only with Replaceable Battery Pack SKC LTD P21030. Do not disconnect battery pack from the pump in hazardous locations.
- 15.2 The battery pack shall only be fitted in a clean environment..





### **SCHEDULE**

## **UK TYPE EXAMINATION CERTIFICATE**

CSAE 22UKEX1237X Issue 0

- 15.3 Do not charge battery or connect to Datatrac PC Interface port in hazardous locations.
- 15.4 The maximum input voltage, Um, at the Datatrac PC Interface port of the 210-3311 AirChek 3000 Air Sampling Pump is 6 V. The safe area apparatus that is to be connected to the Datatrac PC Interface port shall be a Safety Extra Low Voltage (SELV) or Protective Extra Low Voltage (PELV) circuit.
- 15.5 The equipment shall not be subjected to intense sunlight for long periods.
- The window associated with the Liquid Crystal Display could possibly store an electrostatic charge if rubbed. Therefore, the user shall implement precautions to prevent the build up of electrostatic charge. This is particularly important if the equipment is installed in a zone 0 location. In addition, the equipment shall only be cleaned with a damp cloth.
- 16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (REGULATIONS SCHEDULE 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed in Section 9, all other requirements are demonstrated in the relevant reports.

- 17 PRODUCTION CONTROL
- 17.1 Holders of this certificate are required to comply with production control requirements defined in Schedule 3A, as applicable, and CSA Group Testing UK Regulations for Certificate Holders





# **Certificate Annexe**

Certificate Number: CSAE 22UKEX1237X

Product: 210-3311 AirChek 3000 Air Sampling Pump

Manufacturer: SKC Limited

### Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
SKC-IS-0042	1 of 1	3	20 Jun 22	Battery pack PCB BOM
SKC-IS-0046	1 of 1	3	20 Jun 22	Interface PCB BOM
SKC-IS-0055	1 to 2	5	20 Jun 22	Main PCB BOM
SKC-IS-0057	1 of 1	3	23 Oct 20	Battery Pack Assembly AirChek 3000 Pump
SKC-IS-0058	1 of 1	3	17 Jun 14	210-311 AirChek 3000 Pump Assembly
SKC-IS-0056	1 of 1	4	17 May13	Pump Motor Specification
SKC-IS-0060	1 of 1	1	28 Apr 11	Block diagram
SKC-IS-0039	1 of 1	2	28 Apr 11	Battery pack PCB assembly
SKC-IS-0040	1 of 1	2	28 Apr 11	Battery Pack Schematic
SKC-IS-0041	1 of 1	2	28 Apr 11	Battery Pack PCB layout
SKC-IS-0043	1 of 1	3	28 Apr 11	Interface PCB Assembly
SKC-IS-0044	1 of 1	1	28 Apr 11	Interface circuit schematic
SKC-IS-0045	1 of 1	3	28 Apr 11	Interface PCB Layout
SKC-IS-0047	1 of 1	1	28 Apr 11	Keypad PCB assembly
SKC-IS-0048	1 of 1	1	28 Apr 11	Keypad circuit schematic
SKC-IS-0049	1 of 1	2	28 Apr 11	Keypad PCB layout
SKC-IS-0050	1 of 1	1	28 Apr 11	Keypad PCB Parts list
SKC-IS-0051	1 of 1	1	28 Apr 11	Main PCB Assembly
SKC-IS-0052	1 & 2	2	28 Apr 11	Main circuit schematic
SKC-IS-0053	1 of 1	2	28 Apr 11	Main PCB layout
SKC-IS-0054	1 of 1	2	28 Apr 11	Pump Run PCB Layout
SKC-IS-0061	1 of 1	1	28 Apr 11	Sensor details
SKC-IS-0059	1 of 1	3	21 Jul 22	Label drawing

