1 **UNITED KINGDOM CONFORMITY ASSESSMENT**

UK TYPE EXAMINATION CERTIFICATE

2 **Product Intended for use in Potentially Explosive Atmospheres**
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1

3 Type Examination Certificate Number: **ExVeritas 21UKEX1054X** Issue: **0**

4 Product: Pre-Start Ventilation System

5 Manufacturer: EXPO Technologies Limited

6 Address: Unit 2, The Summit, Hanworth Road, Sunbury on Thames, Surrey, TW16 5DB, United Kingdom

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

8 ExVeritas Limited Approved Body number 2585, 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 by UKSI 2019:696), 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.

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

EN IEC 60079-0: 2018 **EN IEC 60079-7:2015+A1:2018**

Except in respect of those requirements listed at section 16 of the schedule to this certificate.

10 If the sign “X” is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This 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 equipment shall be as detailed in the description section of this certificate (section 12.1, overleaf)

UKAS PRODUCT CERTIFICATION
No. 8613

On behalf of ExVeritas

S Clarke CEng MSc FIET
Managing Director

Schedule

12.1 Marking

Standard version

II 2G Ex eb IIC T5 Gb Ta = -20°C to +60°C

Standard version with /ET or /ES

II 2G Ex eb ia IIC T5 Gb Ta = -20°C to +59°C…or…II 2G Ex eb ia IIC T4 Gb Ta = -20°C to +60°C

Low temperature version

II 2G Ex db eb IIC T3 or T4* Gb Ta = Ta -60°C to +60°C * Dependent upon heater

Low temperature version with /ET or /ES

II 2G Ex db eb ia IIC T3 or T4* Gb Ta -60°C to +60°C … * Dependent upon heater

The following line is added to the Pre-start Ventilation System designation table after the DXXX option:

LT = Low Temperature option

13 Description of Product

The Expo Technologies Pre-Start Ventilation System is intended to provide pre-start ventilation for motors in a hazardous area. The equipment consists of a control unit and a relief valve, which contains various electrical, mechanical, and pneumatic components for the control of ventilation gas to an associated motor (not included in this certificate), at a set flow rate and for a predetermined time. Alternative arrangements include the provision of an electronic timer, a solenoid valve, and the option for extended or continuous ventilation. A low temperature version is available which includes a certified heater and thermostat.

The following representative placeholder indicates the order of the model number. This disambiguation comprehensively defines the part numbers using the characteristic letters which are defined in the table overleaf.

Part Number: a b c d e

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Characteristic letter	Definition
a - Size or Capacity	1 = Flow rate up to 225 l/min 2 = Flow rate up to 450 l/min 3 = Flow rate up to 1500 l/min 4 = Flow rate up to 3000 l/min 5 = Flow rate up to 6000 l/min 6 = Flow rate up to 9000 l/min 7 = Flow rate up to 14000 l/min
b - Pre-start Ventilation Type	PV = Pre-start Ventilation PP = Pre-start Ventilation (alternative)
c - Control Unit Enclosure Material/Mounting Configuration	al = Aluminium alloy cs = Mild steel, painted ss = Stainless steel bp = Back Plate only co = Chassis only pm = Panel mounting nm = Non-Metallic
d - Start Option	LS = Local start using start switch on PV/PP system RS## = Remote start using Ex rated solenoid kit
e - Fitting Option	A = ANSI flange connection fittings used D = DIN flange connection fittings used B = BSP Pipe connection fittings used N = NPT Pipe connection fittings used # = letter showing non-certified pipe fitting

Option codes (Added only if used)

FM	Flow Meter(s) fitted on enclosure to indicate ventilation flow
IS	Internal Switches suitable for Ex i circuits.
MR	Mechanically Resets ventilation reset signal.
ER	Electronically Resets ventilation reset signal.
PR	Pneumatically Resets ventilation reset signal.
MT	Mechanical Timing used to time pre-start ventilation cycle
PT	Pneumatic Timing used to time pre-start ventilation cycle
ET	Electronic Timing used to time pre-start ventilation cycle
HP	High Pressure sensor fitted to prevent over pressure.
OV	Outlet valve, pneumatically operated.
PA	"Ex" switch(es) built-in, with/without "Ex" junction box.
SP	Secondary Pre-Ventilation supply options.
SS	Separate Supply for Protective gas and Logic air.
TW	Twin (or more) outputs for two or more separate ventilated enclosures ventilated in parallel.
HS	High Supply Pressure up to 16 Bar.
CV	Ventilation sustained indefinitely after completion of ventilation cycle
EV	Ventilation extended for predefined period of time after completion of ventilation cycle
DXXX	Special design, no certification related options
LT	Low Temperature option
/ES	Electronic timer with EPPS
/ET	Electronic timer with the battery

Schedule

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R3380/A/1	10/11/2021	0	Initial issue of the Prime Certificate

14.2 Compliance Drawings:

Title:	Drawing No.:	Rev. Level:	Date:
Ventilation Complete Reset Options for PV system.	SD8036	03	11/11/2020
Pre-start Ventilation Housing.	SD8038	06	11/11/2020
Pre-start Ventilation Model Numbers.	SD8043	04	25/11/2020
Circuit Diagram for PV/PP System.	SD8044	06	11/11/2020
High Pressure Option 'HP'.	SD8049	03	11/11/2020
Timing Options for PV System.	SD8066	06	11/11/2020
Pre-Start Ventilation System Certification Label (UKEX).	SD8516	0	07/10/2021
PV & PP System Low Temp. Wiring (Typical).	SD8312	02	11/11/2020
PV & PP Low Temperature Housing.	SD8313	02	11/11/2020

15 Specific Conditions of Use

15.1 Special Conditions for Safe Use

- The intended use of this equipment is as a pre-start ventilation system. It is the user's responsibility to ensure the correct functionality of the equipment when in use.
- The equipment enclosure may contain RTDs or simple resistive switches. It is the user's responsibility to ensure that these are connected into suitably certified intrinsically safe circuits.
- The Pre-Start Ventilation System, low temperature version, shall be protected by a safety related system that ensures that it cannot be energised if the temperature of the air inlet or controller unit falls below -20°C. This system shall utilise the RTDs that are fitted to the control unit to provide the appropriate level of safety integrity, i.e. a level of operational safety of Cat 3 according to EN 954-1 for Category 2 (Zone 1) applications; note that these RTDs have not been assessed as a safety related device in accordance with EHSR 1.5 of the Regulations Schedule 1.
- When the equipment is provided with an intrinsically safe solenoid valve, the user must ensure that any associated line inductance is within the parameters of the solenoid valve certificate.

15.2 Routine tests

- None

16 Essential Health and Safety Requirements (Regulations Schedule 1)

Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1

The manufacturer shall inform ExVeritas of any modifications to the design of the product described by this schedule.