

(1) **Declaration of Conformity**

(2) Expo Technologies Document Number EXPO 11ATEX1182X/1

(3) This declaration is issued for the electrical apparatus:

Pre-Start Ventilation Systems 4PP, 6PP & 7PP

(4) Manufacturer:

Expo Technologies Ltd
Hanworth Road
Sunbury on Thames
Surrey
U.K.
TW16 5DB

(5) This electrical apparatus and any acceptable variation thereto are specified in the Annex to this certificate and the documents therein referred to.

(6) This apparatus fulfils all the requirements for Group II Category 3G equipment in accordance with European Directive 94/9/EC

The design is documented in Expo Technical Construction File SC24.

Manufacture is controlled under Sira Quality Assurance Notification Sira 99 ATEX M043

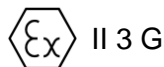
The compliance with the Essential Health and Safety Requirements has been assured with compliance with the following standards:

BS EN 60079-0:2009 General requirements

The apparatus has been assessed, as specified in the Annex to this certificate, against the requirements of the following standards:

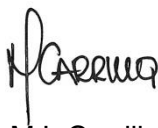
BS EN 60079-2:2007 Equipment protected by pressurized enclosure "p"
BS EN 60079-7:2007 Equipment protection by increased safety "e"
BS EN 60079-15:2010 Equipment protection by type of protection "n"

(7) The apparatus marking shall include the code:

 II 3 G

For T Class and Gas Group refer to the Annex to this certificate.

For and on behalf of Expo Technologies Ltd.
Sunbury on Thames, 28th March 2013



M L Carrillo
Certification Manager



D L Baker
Manager Consultancy Services

Annex to Declaration of Conformity EXPO 11ATEX1182X/1

(8) Description

The Pre-Start Ventilation System, type 4PP, 6PP or 7PP, is a ventilation system designed to remove any explosive gases which may ignite during motor start-up. The system is suitable for use with Ex e and Ex n rotating electrical machines when used in areas designated as Zone 2 only –where Equipment Category 3 is required.

Ambient temperature range -20°C to +55°C

The Pre-Start Ventilation System has been found compliant with the Essential Health and Safety Requirements of the ATEX directive, by the mitigation of ignition risk by using the safety principles laid out on the following standards:

BS EN 60079-2:2007 Equipment protected by pressurized enclosure “p”

The Pre-Start Ventilation System complies with the requirements for purging of enclosures required for types of protection ‘pz’ & ‘py’.

Selection of the Ventilation Flow Rate and the Ventilation Time is defined by reference to the enclosure volume as specified in BS EN 60079-2:2007

BS EN 60079-7:2007 Equipment protection by increased safety “e”

The Pre-Start Ventilation System is compliant with the requirements laid out on Clauses 5.2.4.3 and 5.2.7 of BS EN 60079-7:2007, ensuring that the enclosure of rotating electrical machines does not contain an explosive gas atmosphere at the time of starting.

BS EN 60079-15:2010 Equipment protection by type of protection “n”

The Pre-Start Ventilation System is compliant with the requirements laid out on Clauses 8.8.3 and A.2 of BS EN 60079-15:2010. By the removal of any ignitable accumulation of flammable gases from non-sparking electrical rotating machines, the system ensures the enclosure does not contain an explosive gas atmosphere at the time of starting.

Relief Valve

The Pre-Start Ventilation System is supplied with an overpressure relief valve, which is to be fitted to the protected Ex e or Ex n rotating electrical machine, to prevent an internal overpressure above the maximum overpressure rating of the apparatus. There are three models of relief valve; the designation of each relief valve refers to its nominal bore in mm, as follows:

RLV52, RLV104, and RLV200.

The outlet of the Relief Valve is fitted with a spark arrestor, which can be Metal foam or Multi-layer stainless steel mesh.

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(8) Description ... Continuation

Options

Model Number:	4 PP ss ET PO IS
Key:	a PP bb cc
Model Number Designation for Pre-Start Ventilation systems	
a	Size or Capacity
4	Pre-Start Ventilation 700 to 1500 l/min
6	Pre-Start Ventilation 2000 to 6000 l/min
7	Pre-Start Ventilation 7000 to 12000 l/min
bb	Material of the Pre-Start Ventilation System Enclosure
cs	Mild steel, painted
ss	Stainless steel
cc	Option Codes (Added only if used)
ET	Electronic Timer [no code indicates Pneumatic Timer]
IS	Internal Switches suitable for Ex i (Switches are simple apparatus)
PA	"Ex d" switch(es) built-in to be terminated in "Ex" junction box.
PO	Pneumatic Output signals for Power and Alarm control.

Low Temperature Option

The Pre-Start Ventilation System may be supplied with an additional, heated, stainless steel enclosure to permit it to be used within an ambient temperature down to -50°C. This enclosure is fitted with an Ex d m heater and an Ex e terminal box for connection of the heater leads.

Ambient temperature range for the Low Temperature Option Ta -50°C to +55°C

T Class and Gas Group may vary according to the Ex d m heater and Ex e terminal box classifications, as indicated in Clause 9.2 of this certificate.

Remote Start

The Pre-Start Ventilation System may be remotely started by means of an Ex certified Solenoid Valve. When a Solenoid Valve is used, the following electrical data may be afforded to the system:

Power supply 5, 12-24, 50, 110 or 230V dc / ac 50-60 Hz

Current Consumption 8 – 16 mA according to valve type and supply voltage

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(9) Special conditions of safe use

- (1) It is the sole responsibility of the user to ventilate the protected Ex e or Ex n rotating electrical machine as per full requirements of BS EN 60079-7:2007 or BS EN 60079-15:2010 respectively.
- (2) T Class and Gas Group for systems including optional Ex certified apparatus, shall be allocated in accordance with options installed, as follows:

Option	Marking of the Ex certified apparatus
ET Option	Ex ia IIC T6
PA Option	Ex e IIC T5
Ex ia Solenoid Valve	* Ex ia IIC T6
Ex m Solenoid Valve	* Ex m II T4 or Ex m II T5
Low Temperature Option	* Heater Ex d m IIC T4 * Terminal box Ex e IIC T5 or Ex e IIC T6

* Markings may vary dependent on selected apparatus

- (3) It is responsibility of the user to ensure that the temperature of the ventilation gas does not exceed +55°C at all times.
- (4) When used, the wiring of the solenoid valve must be made in accordance with the requirements of the certification of the valve. Intrinsically Safe wiring must be segregated from non-intrinsically safe wiring by at least 50mm.

(10) Test Documentation

- (1) Assessment Report SC24
- (2) Drawings

CRT-DRW0-000	Pre-Start pneumatic timer system	Issue 01 dated 21/04/11
CRT-DRW0-001	Pre-Start electronic timer system	Issue 01 dated 21/04/11
PP-GA	Pre-Start Ventilation GA	Issue 01 dated 08/07/11
CRT-DRW0-002	RLV Configurations	Issue 01 dated 08/07/11
CRT-DRW0-003	Low temperature housing	Issue 01 dated 08/07/11
CRT-DRW0-004	Pre-Start Certification Label	Issue 01 dated 08/07/11

Variation 1 – 28/Mar/2013

This variation was issued due to the manufacturer's change of address.