



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: Sira 00ATEX2113

4 Equipment: Maxseal Solenoid ICO2S Pilot Assisted Instrument Change Over Valve

5 Applicant: Thompson Valves

6 Address: 17 Balena Close
Creekmoor
Poole
Dorset
BH17 7EF

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number R51X6377A.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 50014:1997 (inc amendments A1 and A2)
EN 50020:1994
EN 50284:1999

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

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 1G
EEx ia IIC T6 T_a (-40°C to +64°C)

Project Number 51X6377
Date 9 October 2000
C. Index 12

M D Shearman
Certification Manager

This certificate and its schedules may only be reproduced in its entirety and without change

Sira Certification Service

Rake Lane, Eccleston, Chester, CH4 9JN, England
Tel: +44 (0) 1244 670900 Fax: +44 (0) 1244 681330
Email: exhazard@siratc.co.uk



SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 00ATEX2113

13 DESCRIPTION OF EQUIPMENT

The Maxseal Solenoid ICO2S Pilot Assisted Instrument Change Over Valve is designed to operate a pneumatic valve when connected to a dc supply voltage. The valve comprises an intrinsically safe solenoid cartridge mounted within a 316 stainless steel enclosure. This IS cartridge consists of a magnetic steel case, within which is a coil encapsulated with epoxy resin that is rated to 130°C and has a CTI of 400. The purpose of the encapsulant is to exclude the explosive atmosphere and provide a thermal path to dissipate the heat generated in the coil assembly.

Intrinsic safety is achieved by adequately rated diodes that suppress the inductance of the coil, segregation, encapsulation and the connection integrity of the solenoid/diode assembly. The intrinsically safe circuitry is isolated from the remaining equipment to withstand at least a 500 V_{RMS} test voltage.

Safety Description: $U_i = 28$ Vdc
 $I_i = 300$ mA
 $P_i = 1.3$ W
 $L_i = 0$
 $C_i = 0$

14 DESCRIPTIVE DOCUMENTS

14.1	Drawing No.	Rev.	Sheet	Date	Title
	QBA0000000000I0CERT	06	1 of 3	21 Sep 00	ICO2S Intrinsically Safe Certified Drawing EEx ia IIC T6/T4 & ATEX II 1 G
	QBA0000000000I0CERT	2	2 of 3	04 Jul 00	ICO2S Intrinsically Safe Systems Drawing
	QBA0000000000I0CERT	03	3 of 3	08 Sep 00	ICO2S Intrinsically Safe Certified Drawing EEx ia IIC T6/T4 & ATEX II 1 G
	QB0000000000I0DESC	01	1 of 1	22 Jun 00	ICO2S Operating Features Drawing
	4M20-00-015	06	1 of 1	21 Sep 00	ICO2S PCB

14.2 Report No. R51X6377A

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

None

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in Report No.R51X6377A.

17 CONDITIONS OF CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of SCS Certificates.

17.2 The solenoid valve shall be subjected to a routine test voltage of 2200 Vdc for at least 2 seconds between the internal electrical equipment and the outer case. There shall be no breakdown of insulation as required by clause 11.2 of EN 50020:1994.

Date 9 October 2000

This certificate and its schedules may only be reproduced in its entirety and without change

Sira Certification Service

Rake Lane, Eccleston, Chester, CH4 9JN, England
 Tel: +44 (0) 1244 670900 Fax: +44 (0) 1244 681330
 Email: exhazard@siratc.co.uk