

# (1) EC-TYPE-EXAMINATION CERTIFICATE

- (2) Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere - **Directive 94/9/EC**
- (3) EC-Type-Examination Certificate Number

## TÜV 09 ATEX 7458 X

- (4) Equipment: Process Gas Chromatograph PGC 90.50
- (5) Manufacturer: DANI Instruments S.p.A.
- (6) Address: Viale Brianza 87, 20093 Cologno Monzese (MI) - Italy
- (7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV CERT-Zertifizierungsstelle for ex-protected products of TÜV Rheinland Industrie Service GmbH, TÜV Rheinland Group, notified body No. 0035 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmosphere, given in Annex II to the Directive.
- The examination and test results are recorded in the confidential report 296/Ex 458.00/09
- (9) Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:  
**EN 60079-0: 2006 EN 60079-1:2007 EN 1127-1: 2007**
- (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 EC-Type-Examination Certificate relates only to the design and specification for construction of the equipment or protective system. It does not cover the process for actual manufacture or supply of the equipment or protective system, for which further requirements of this Directive are applicable.
- (12) The marking of the equipment shall include the following:

 II 2 G Ex d IIC T4

TÜV CERT-Zertifizierungsstelle für Explosionsschutz

Cologne, 2009-03-06

  
Dipl.-Ing. K. Wettingfeld

This EC-type-examination Certificate without signature and stamp shall not be valid.  
This EC-type-examination Certificate may be circulated only without alteration. Extracts or alterations are subject to approval by the  
TÜV Cert-Zertifizierungsstelle für Ex-Schutz-Produkte  
TÜV Rheinland Industrie Service GmbH TÜV Rheinland Group Am Grauen Stein 51105 Köln  
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(13) Annex to

(14) **Type-Examination Certificate**  
**TÜV 09ATEX 7458 X**

(15) Description of the Equipment

15.1 Subject and Series

Process Gas Chromatograph PGC 90.50

15.2 Description:

The Process Gas Chromatograph PGC 90.50 is meant for the separation and determination of components of a gaseous sample (analysis). Typical samples are natural gas including O<sub>2</sub> and N<sub>2</sub> and industrial gas mixtures in chemical technological processes.

The Chromatograph consists of an already ATEX approved flameproof enclosure described in the certificate INERIS 02 ATEX 0044 X. This approved enclosure has been modified using a sensor unit including heating system. The control system consisting of different pressure switches and valves is placed into that enclosure. The temperature limitation of the heating system is approved according to SIL 2.

15.3 Technical datas

Power supply:	230 V AC
Helium Gas supply:	6 bar (used for internal valves and pressure switches)
Ambient temperature:	-20 °C ≤ Ta ≤ +40 °C

(16) Test Report No. 296/ Ex 458.00/09

(17) Special Conditions of safe use

1. Only ATEX approved cable glands suitable for explosion group IIC shall be selected and used by the end user.
2. Only Helium must be used for the service of the internal valves and pressure switches.
3. The Gas Chromatograph PGC 90.50 has to be installed in a vibration free environment.

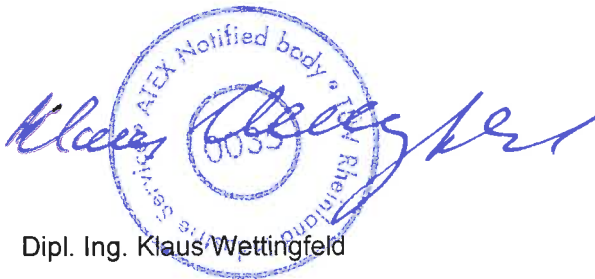
4. The temperature limiter to ensure the temperature class T4 is designed as a SIL 2 circuitry internally. The circuitry has to be implemented in the external circuitry with the same safety level in that way that a new start command can be done only after restart lockouts have been intentionally reset.  
The proof test of the safety circuitry has to be performed once a year at least.
5. A pressure test with 10 bars at least a year has to be performed on the internal tubes and pipes.
6. The enclosure must not be opened when energized.  
A warning label "Do not open when energized!" is to be placed on the enclosure.

(18) Basic Safety and Health Requirements

covered by afore mentioned standards

TÜV CERT - Zertifizierungsstelle

Köln, 2009-03-06

  
Dipl. Ing. Klaus Wettingfeld