SAGITTARIUS (FID) FOR LOWER EXPLOSURE LIMIT MONITORING OF FLAMMABLE GASES

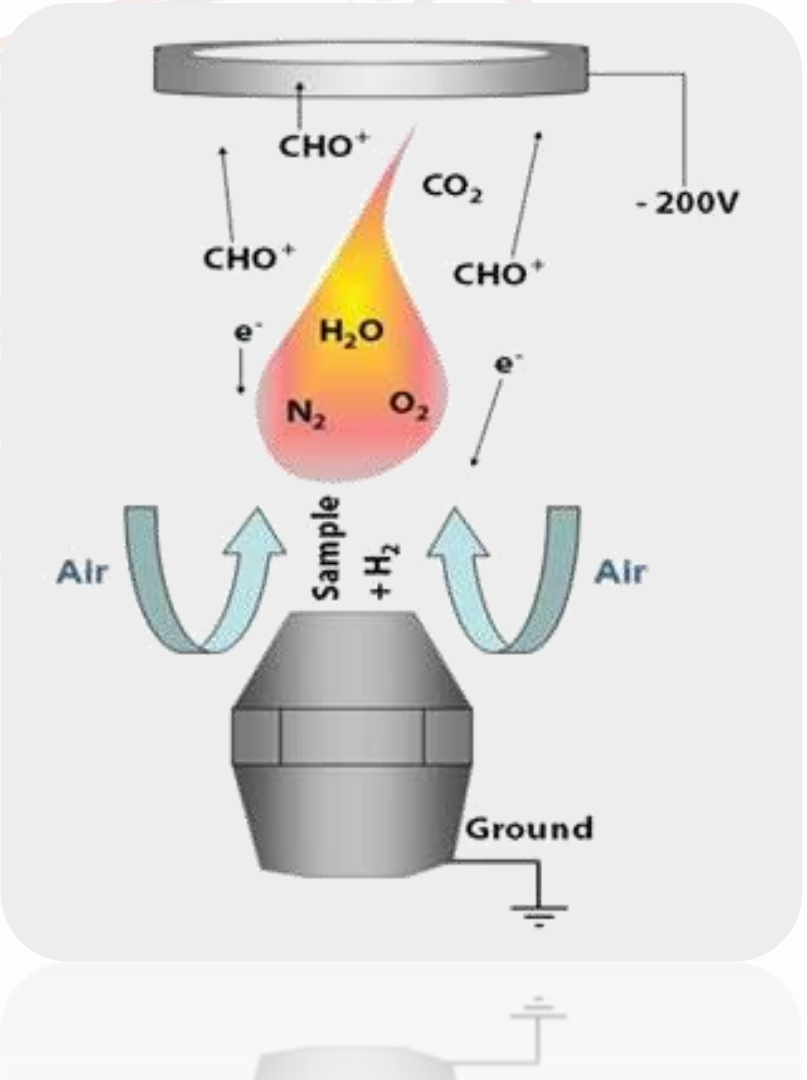
- Fast response time (T90 in less than 2 seconds).
- High reliability and stability in time.
- Ex Proof and EN 1539 certifications.
- Low management costs.
- Single/multipoint monitoring, heating up to 200°C.
- Wall or rack mounting and outdoor installation.

WORKING PRINCIPLE

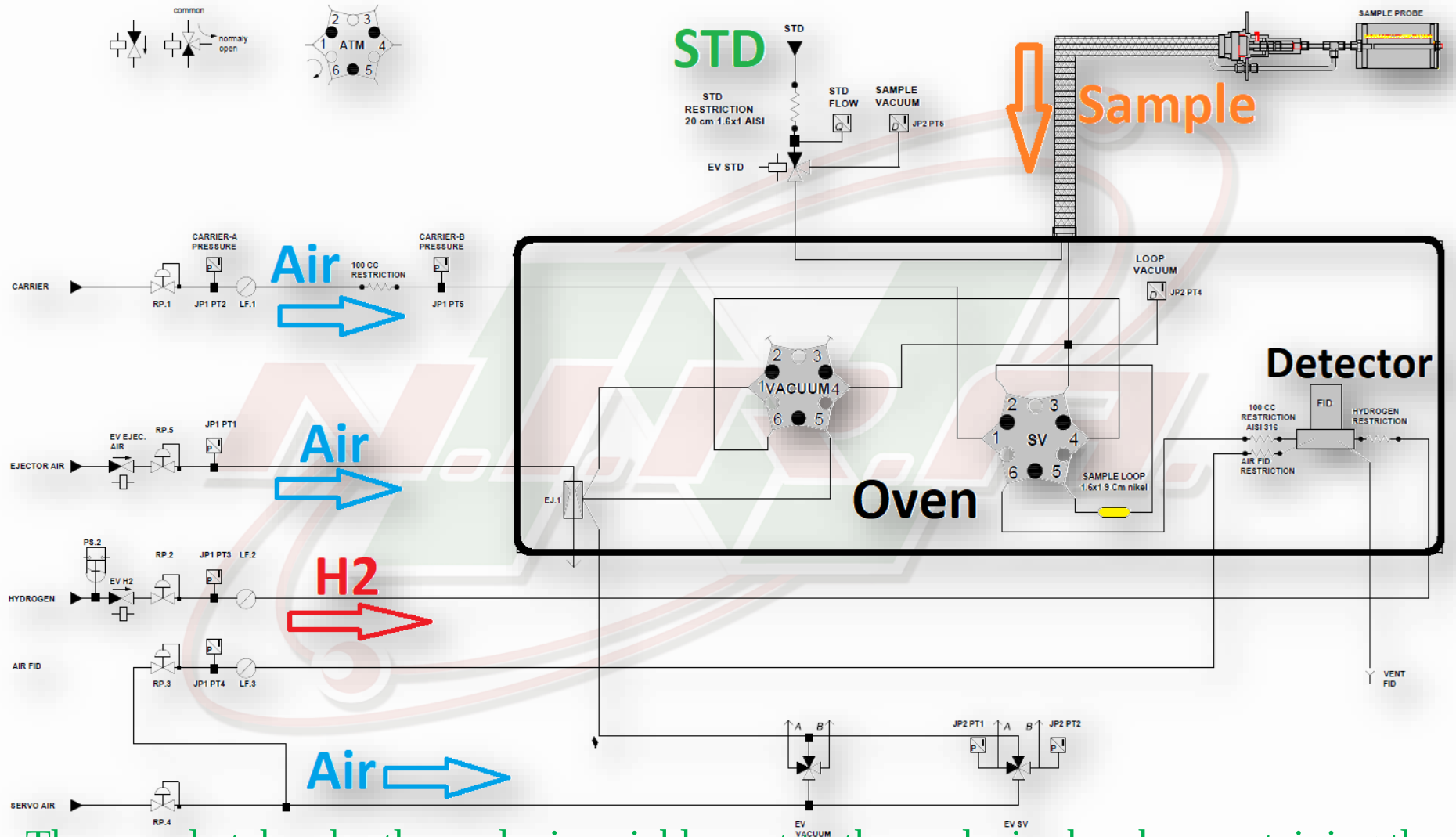
F.I.D., flame ionization detector.

Through the combustion between clean air, hydrogen and the sample gas, the FID can detect hydrocarbon's ions that induce a current. This current is directly proportional to the organic chemical concentration inside the sample gas.

The FID is considered the most precise and reliable detector on the market, fits any kind of application even for high temperature samples.



HOW IT WORKS, ANALYTICS

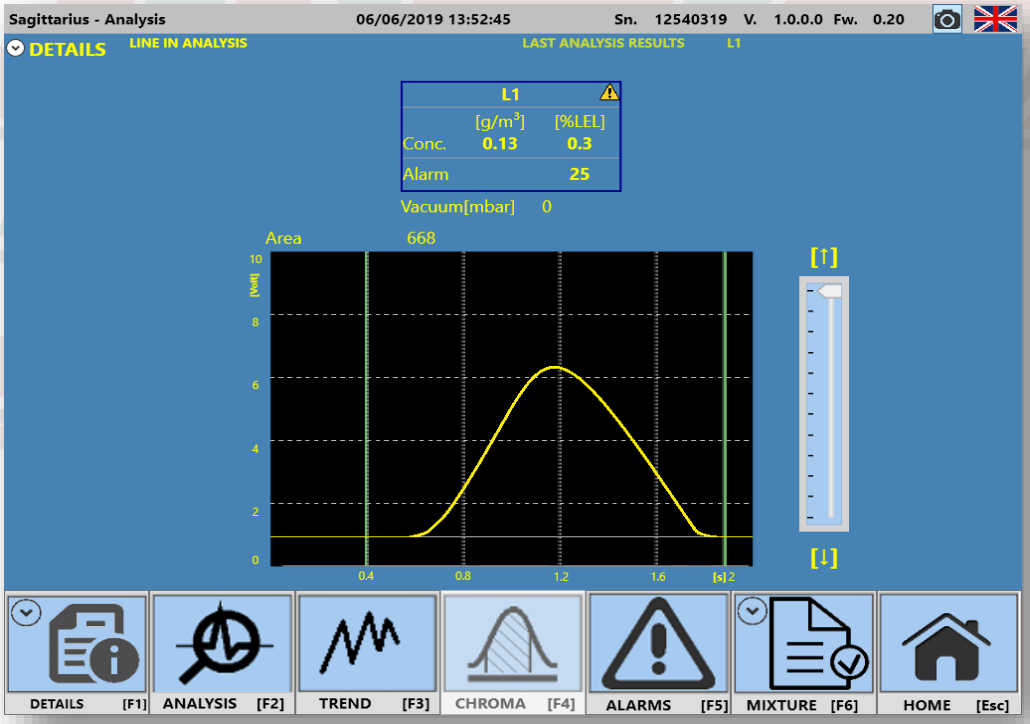


The sample taken by the probe is quickly sent to the analysis chamber containing the membrane valves (low maintenance). Various cross-checks of flow rates and pressures guarantee the reliability of the measurement.

SAMPLING LOOP ANALYSIS TECHNOLOGY

Our FID analyser is equipped with the best sampling technique.

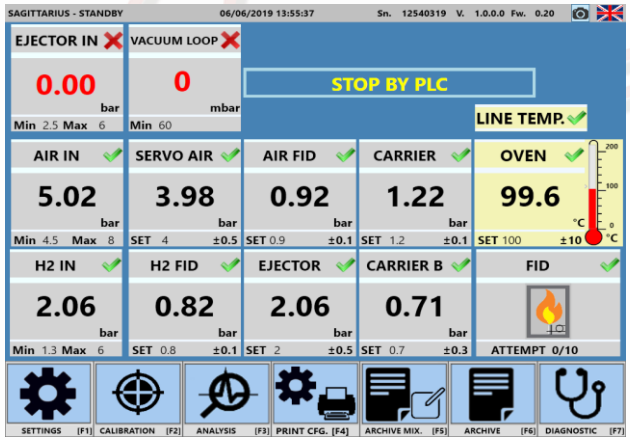
A known volume of sample is repeatedly aspirated, drawn (through a loop), and pushed into the detector, resulting in much more stable, accurate and repeatable results than all standard continuous sample flow technologies. The small volume used keeps analyser clean and reduces maintenance/calibration frequencies.

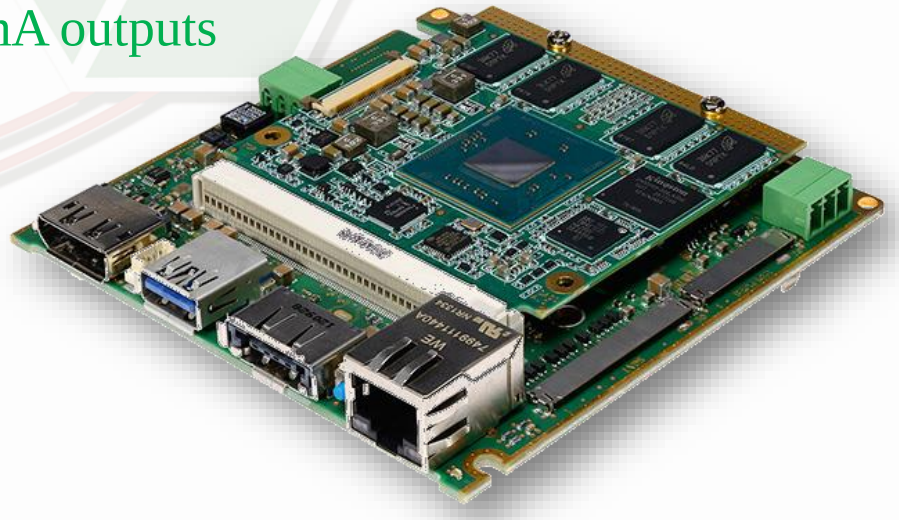


PC EMBEDDED TECHNOLOGY

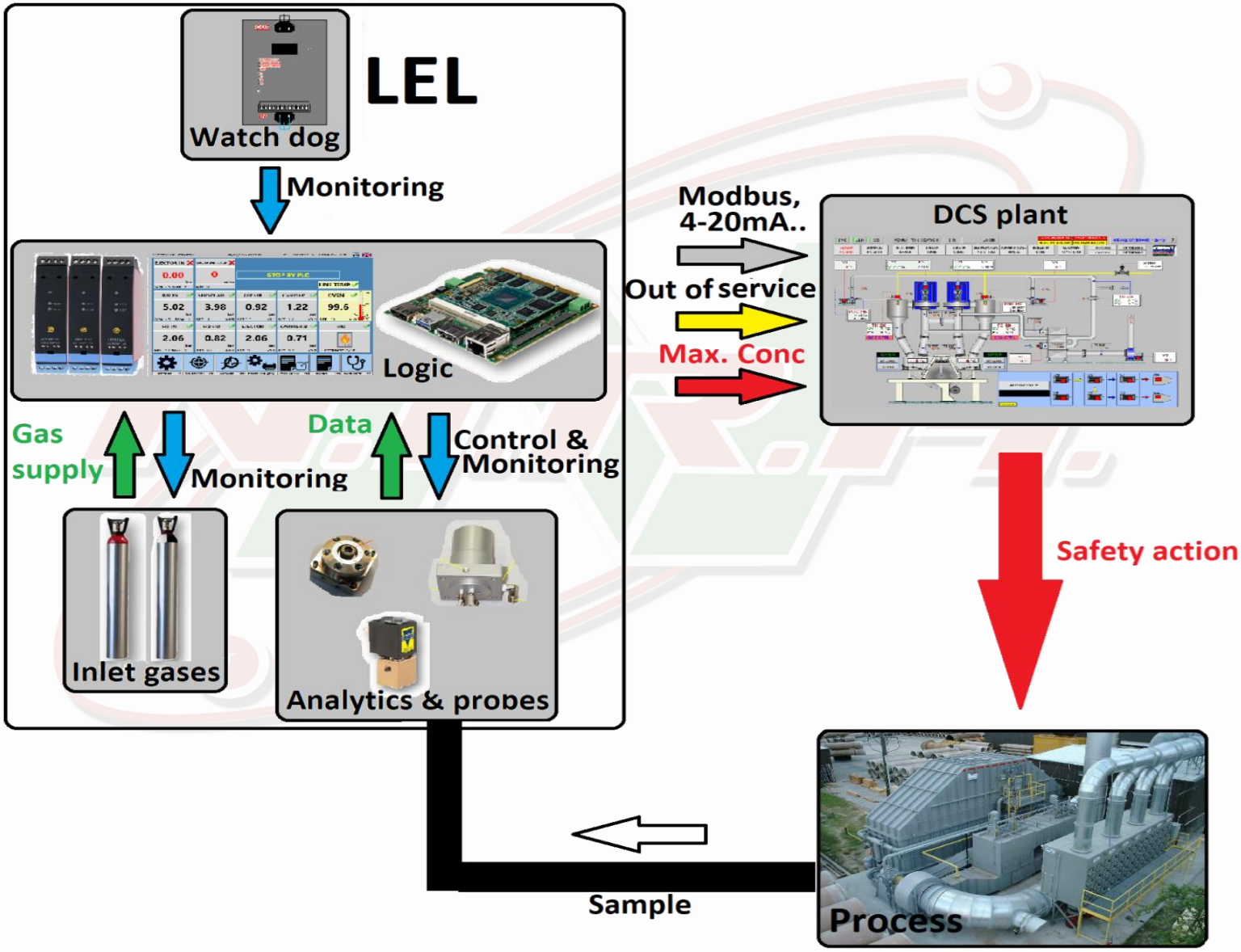
We integrated a robust industrial PC, that works on Windows® embedded operative system, advantages:

- Software supervision on all parameter
- High software stability, externally monitored by a watchdog system
- Software supervision on every operation step
- Analysis trend and alarms/faults storage in the local memory
- Simple and clear user interface
- USB , Ethernet, Modbus and 4-20mA outputs





HOW IT WORKS, LOGIC



EX-PROOF AND EN 60079-29-1 NORMS

Page 1 of 1

Certificate

Certification of Compliance

Certificate no.: 281 10 269

N.I.R.A. s.r.l.

Via Locatelli, 113
I – 20046 Biassono (MB)

TÜV Rheinland Italia herewith certifies that multi[illegible] gas monitoring system, intended to be used for the measurem[illegible] of the concentration of the released flammable substances, is conf[illegible] the requirements of the standard EN 1539:2009 § 5.9[illegible]

Gas monitoring system has been [illegible] according to the standards EN 60079-29-1

Reference standards : EN 1539:2009 - [illegible] (Gas monitoring systems)
EN 60079-29[illegible]

TÜV Report : E 2[illegible] March 25th 2010

Equipment : [illegible] MULTI LINE MONITORING SYSTEM
[illegible] : SAGITTARIUS [illegible] & 22[illegible] L.E.L.

Location : Milan

Date : 2010-03-30

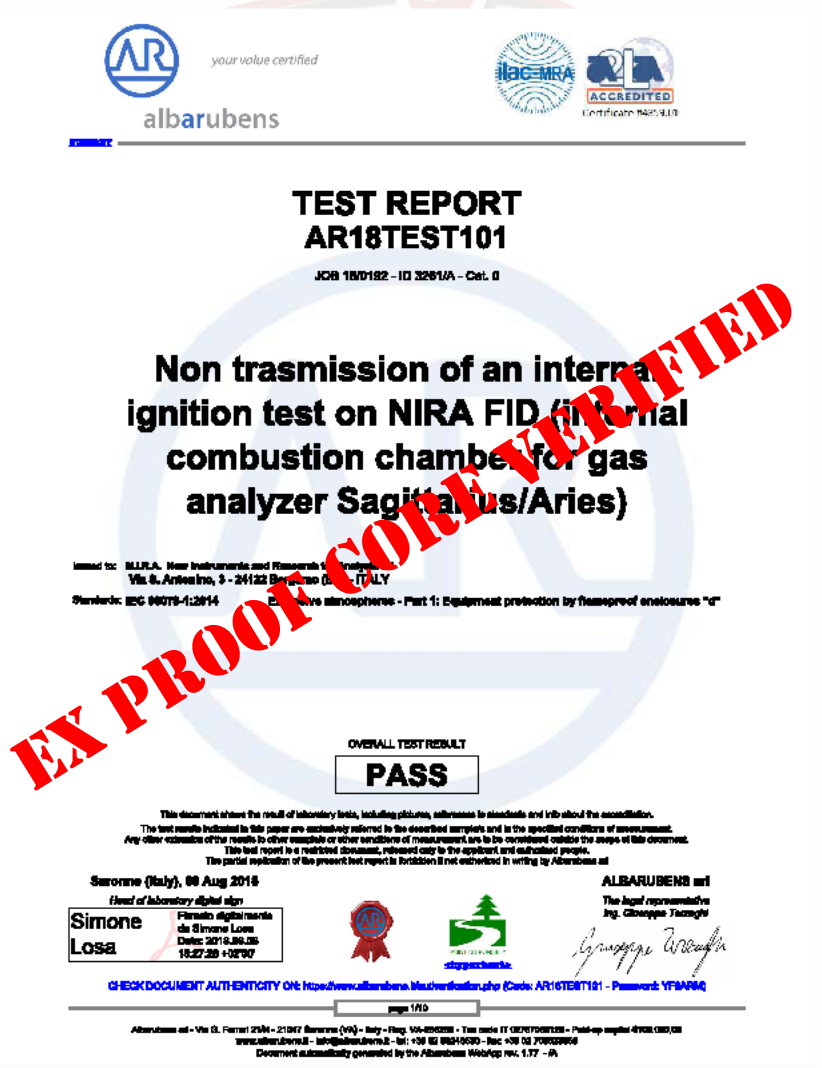
Dipl.-Ing. J. Moreno
PED, ATEX, Emission Trading
Industrial Services Manager

TÜV Rheinland Italia – Industrie Service
Inspection Body
Via Italia, 1
I – 24030 Medolago (BG)
Tel. +39 035 4933147, e-mail: bergamo@tuv.com

www.tuv.com

TÜVRheinland®
Precisely Right.

METROLOGICAL & EN 1539



your value certified
albarubens

ACCREDITED

TEST REPORT
AR18TEST101

JOB 18/0192 - ID 3261/A - Cat. 0

Non trasmission of an internal ignition test on NIRA FID (internal combustion chamber for gas analyzer Sagittarius/Aries)

Issued to: N.I.R.A. New Instruments and Research [illegible]
Via S. Antonino, 3 - 24122 Bergamo ([illegible]) - ITALY

Standards: IEC 60079-1:2014 [illegible] atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

OVERALL TEST RESULT

PASS

This document shows the result of laboratory tests, including pictures, references to standards and info about the accreditation.
The test results indicated in this paper are exclusively referred to the described samples and in the specified conditions of measurement.
Any other extension of the results to other samples or other conditions of measurement are to be considered outside the scope of this document.
This test report is a restricted document, released only to the applicant and authorized people.
The partial replication of the present test report is forbidden if not authorized in writing by Albarubens srl

Saronno (Italy), 08 Aug 2018

Head of laboratory digital sign

Simone Losa
Firmato digitalmente da Simone Losa
Data: 2018.08.08 18:27:28 +02'00'

ALBARUBENS srl

The legal representative
Ing. Giuseppe Tacoghi

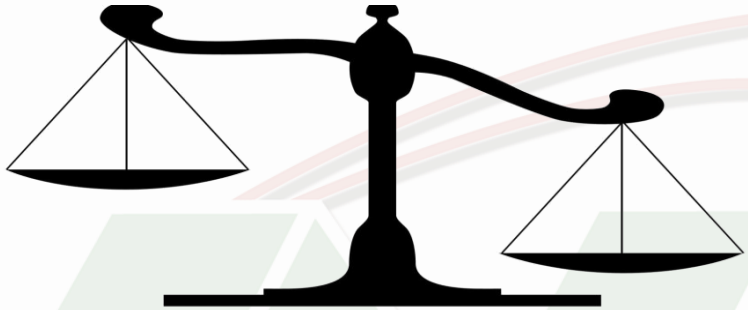
CHECK DOCUMENT AUTHENTICITY ON: https://www.albarubens.it/authentication.php (Code: AR18TEST101 - Password: YF9ARM)

page 1/10

Albarubens srl - Via G. Ferrari 21/H - 21047 Saronno (VA) - Italy - Reg. VA-[illegible] - Tax code IT [illegible] - Paid-up capital [illegible]
www.albarubens.it - info@albarubens.it - tel: +39 02 [illegible] - fax: +39 02 [illegible]
Document automatically generated by the Albarubens WebApp rev. 1.77 - /A

EX PROOF CORE VERIFIED

LEL MONITORING SYSTEMS COMPARISON



Traditional Flame detector

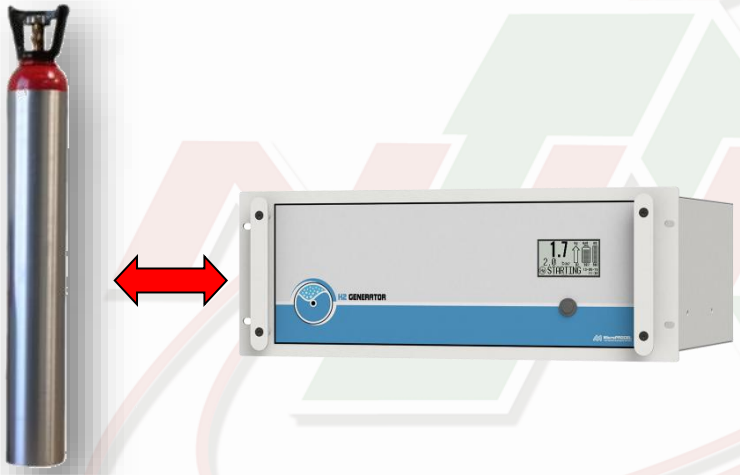
- Frequent calibration and maintenance costs due to huge Span and zero drifts
- Unstable readings with interfering compounds like water or with low Oxygen content in the sample
- Low accuracy in readings (±3% LEL)
- Only complies with EN 60079-29-1

Sagittarius 2000 FID

- Reduced calibration and maintenance costs due to our loop sampling system
- Enhanced reading even with interfering compounds like water or with low oxygen content in the sample.
- High accuracy in readings (±0,5% LEL)
- Complies with EN 60079-29-1 and EN 1539 (oven and furnaces norm)

REQUIREMENTS

Our FID systems requires hydrogen and compressed air



Hydrogen 4,5 grade pure (3 bar)

40 Liters gas cylinder or optional H_2 generator

CONSUMPTION = 50 ml/min.

Air from your network (5 bar)

Nira filtering system

CONSUMPTION = 4m³/hour

Power supply 230V or 115V

CALIBRATION AND MAINTENANCE

We worked hard to minimize maintenance and calibration frequencies, obtaining record results.

Every 6 months: Calibration check, the procedure is guided from the software and takes just few minutes using a pre-installed standard gas cylinder.

Once a year, ask for a service visit from our staff.

COMPETENCE IN AFTERSALES

Our service department work worldwide every day, on 6 different kind of Nira instruments:

- E-mail, remote and phone service.
- More than 500 interventions performed per year.
- More than 1000 instruments serviced worldwide.
- Less than 5 working days to organize an intervention within Europe, 10 worldwide.