



New Instruments and
Research for Analysis

SAGITTARIUS SERIES 5000

MULTI-LINE INFRARED LEL MONITORING SYSTEM

Our **NEW INFRARED LEL MONITORING SYSTEM** proposes some innovative technical characteristics, which allows fast response time, simple installations and low maintenance procedure.



Nira Infrared Sensor

Our innovative Infrared sensors differ from all the other similar products on the market, thanks to its special optical system, based on a combination of dual solid state source and dual receiver.

The 4 signals are amplified by an internal microprocessor that constantly compares the absorption values between the sample gas band and the reference band.

This automatic signals compensation system constantly controls and realigns the infrared sensors calibration and for this reason, our infrared sensors are solely calibrated during their construction phase and they don't require any further recalibration during their entire life cycle.

BENEFITS

The new NIRA infrared LEL monitoring system allows some extraordinary advantages for the tobacco, pharmaceutical and food packaging industries:

- › **Low investment.**
- › **High LEL system performances.**
- › **High Safety in printing area.**
- › **Fast response time.**
- › **No infield recalibration.**
- › **Long system warranty.**
- › **Easy and fast installation.**
- › **Low maintenance.**
- › **Easy Infrared sensors and control modules (Micro PLC) replacement.**





■ CERTIFICATION

Our infrared sensors are AtEx (Zone 1) certified (**II 2 G EEx de IIC T6**) and for this reason they can be installed nearby their points of analysis, completely eliminating the sample gas transferring time. The total response time of each analytical line is only 6 sec. (T90). The entire NIRA Infrared LEL monitoring system "Sagittarius series 5000" is **EN 1539** (oven and furnaces in which flammable substances are realised) **TÜV Rheinland certified**.

Our LEL monitoring system, "**Sagittarius series 5000**", has been designed and manufactured in accordance with the Essential Health and Safety Requirements laid down in the directive 94/9/EC commonly referred to as AtEx "Atmosphères Explosibles" directive. Our Infrared sensors are **SIL3, CSA, Gost** and **AtEx** certified zone 1.

■ SAMPLING SYSTEM

The sampling system is made by some ejectors which they are completely maintenance free. Each analytical line has its own sample flow regulator and low sample flow sensor. The sampling systems are installed inside the standalone rack (NIRA LEL control system) which can be located anywhere around the gravure press.

The distance between each infrared sensors (analytical units) and the standalone rack (NIRA LEL control system) doesn't modify the total response time.

■ INDEPENDENCY

Each analytical line is completely independent from the others end they can be easily replaced by any maintenance operator. In case of infrared sensor failure, only the single unit will be affected and the maintenance operator will be able to replace the broken part without stopping the production and/or waiting for NIRA technical service.

■ TECHNICAL SPECIFICATIONS

DETECTOR	<i>Infrared</i>
ANALYTICAL LINES (mod.5000)	<i>Maximum 16 analytical lines</i>
ANALYTICAL LINES (mod.5003)	<i>Maximum 3 analytical lines</i>
RESPONSE TIME	<i>6 sec. per each analytical line</i>
LOWER DETECTABLE LEVEL	<i>1% of LEL</i>
ACCURACY	<i>±3% FS</i>
LINEARITY	<i>±3% FS</i>
MINIMUM DETECTABLE	<i>1% FS</i>
LONG TERM STABILITY	<i>5% FS</i>
ENVIRONMENTAL WORKING TEMPERATURE	<i>+ 5 + 40°C</i>
SAMPLE GAS TEMPERATURE	<i>+ 5 + 65°C</i>
SERVO AIR REQUIRED	<i>6 bar, 4m³/h</i>
ALARMS	<i>Normally close relay contacts free of tension</i>
ANALOGUE OUTPUTS	<i>0-10 Volt or 4-20 mA (Selectable)</i>
DISPLAY	<i>Touch Screen 5,7" or 3,5"</i>
POWER SUPPLY	<i>230 Vac, 50/60 Hz, 150VA +3 lines</i>
DIMENSIONS (mod.5000)	<i>1200x600x1900 mm (L x W x H)</i>
WEIGHT (mod.5000)	<i>240 Kg</i>
DIMENSIONS (mod.5003)	<i>500x250x700 mm (L x W x H)</i>
WEIGHT (mod.5003)	<i>30 Kg</i>

■ CONTROL SYSTEM

The LEL control systems are made by some industrial micro PLC whit touch screen. Anyone of them, It's able to control maximum three analytical lines.

The touch screen displays the actual solvent concentration (in% of LEL and in gr/m3) and all the alarms visualization.

■ WARRANTY

Our Infrared sensors are sold with 5 years warranty on the entire IR sensor and 15 years warranty on the Infrared sensor optical solid state source.



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