

# SONIMIX 3012-10 PORTABLE GAS CALIBRATION SYSTEM WITH GPT AND INTERNAL ZERO AIR GENERATOR

The model **LNI SONIMIX 3012-10 PORTABLE GAS CALIBRATION SYSTEM** with **Gaseous Phase Titration**, is an instrument designed to calibrate and to verify the linearisation of the AIR pollution monitors such as **H2S, BTEX, NH3,CO, HC, SO2, NO/NO2 and O3**.

With the help of critical orifices (nozzles) and the high stability of mechanical pressure regulators, the **SONIMIX 3012-10** is able to dilute gases such as CO, HC, SO2, NO and generating 10 different binary gas concentrations. The dilution points are computed with the flow values of nozzles and the alimending gases. The precision, stability and the reproducibility of the generated mixtures are due to the joint use of critical orifices and the high stability of mechanical pressure regulators.

The ozone generation is competed with an UV lamp. The stability and reproducibility of ozone is due to the measurement and the regulation of the UV light intensity. The day to day reproducibility is assured by a pressure and temperature compensation.

The SONIMIX 3002-10 allow to mix O3 and NO to generate NO2. The gaseous phase titration can be performed at different NO and O3 concentrations (by using one of the 10 different dilution steps and by setting an ozone value between 30 an 500 ppb ).

The internal self regenerable Zero Air generator avoid to use expensive and cumbersome Air cylinders.

The **SONIMIX 3012-10** is composed of four main parts:

- A self regenerable zero Air generator
- A binary diluter with fast rinse circuit, allowing to generate 10 fixed points of concentration and the zero.
- One Ozone generator with UV feedback, pressure en temperature compensation and GPT circuits
- The electronics for command and communication, screen (VFD) and keyboard



## MAIN TECHNICAL DATA

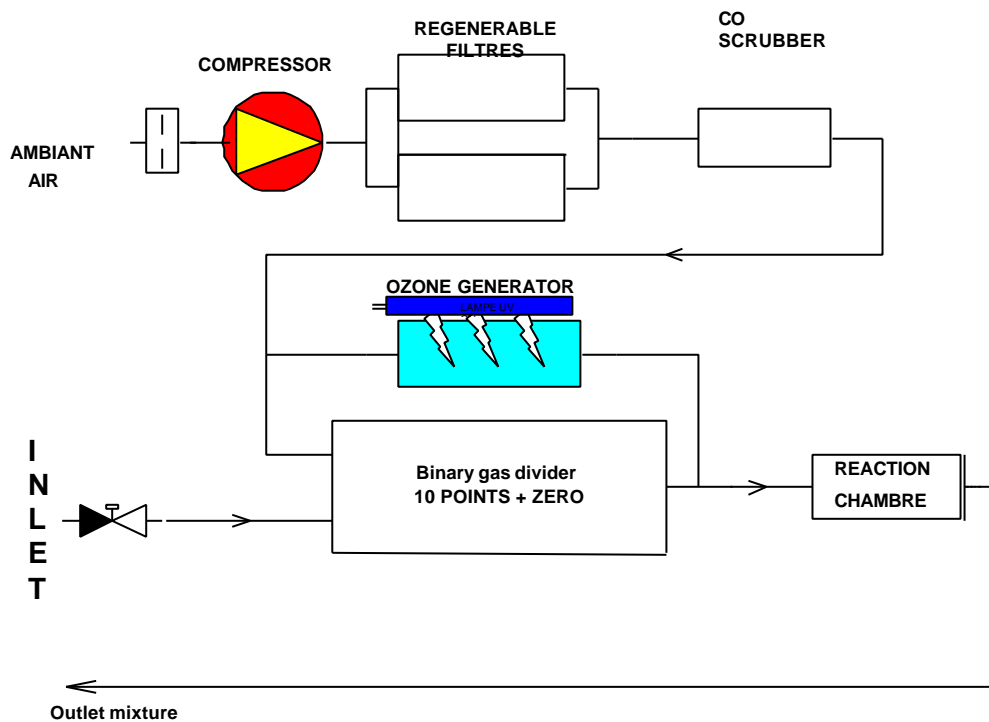
Carrier gas	: Internal zero Air Generator
Diluted gases	: premixtures of SO2 in Air (25-200ppm) CO and HC in Air (1000-10000ppm) NO in N2 (25-200 ppm)



**MAIN TECHNICAL DATA (following)**

Number of dilution steps	:	10 + zero
Dilution steps realised	:	0; 0.05%; 0.1%; ...0.5% of the pollutant concentration contained in the premixture.
Precision of the dilution point	:	better than +/- 0.6% relative
Global non-repeatability of the dilution	:	< +/- 0.3% relative
O3 generation	:	50 ppb to 500 ppb adjustable by software
Repeatability of the O3 concentration generated (during 48 hours)	:	better than +/- 1.5 ppb (at 250 ppb O3)
Total outflow generated	:	about 3000 Nml/min
Gas consumption	Carrier line	: 3050 Nml/min Air ( 3500 + 50 )
	Diluted line	: from 2 to 18 Nml/min of premixture, depending on the dilution point
Purge outflow	:	400 Nml/min of premixture or AIR
Alimenting pressures	:	3.0 +/- 0.3 bar
UV lamp stabilisation time	:	3 to 5 minutes
UV lamp life time	:	about 5000 hours
Adjustment of the O3 generated	:	by displaying a value with the keyboard
Regulation mode of the O3	:	by regulation of the UV light
Special features	:	pressure and temperature compensation
Gas connections		
* outputs to the analysers and By-pass	:	1/4" double ring system in Teflon
* purge output	:	1/4" double ring system in stainless steel
Power consumption	:	220 VAC or 110 VAC / 50 W
Functioning positions	:	horizontal
Dimensions	:	19" 3HE/84 TE , deepness (height) 420mm
Weight	:	about 15 Kg

**PRINCIPLE DIAGRAM**



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