



## Sonimix 6000 C1 Multipoint Multigas Calibrator

### Description

The **SONIMIX 6000C1** is equipped with an interface designed to be directly compatible with the Data Acquisition stations with the ISO7168 protocol, or with the analysers. That feature allows in Remote mode, to receive and to interpret for each gas, the instructions MEASURE, ZERO and CALIBRATION. In Local mode, the interface allows to Configure the calibrator and to perform the manual operations of calibrations and GPT necessary after the maintenance process on the monitors. All internal parameters such as voltage on MFCs ; ozone generator UV light and current, temperature, pressure, permeation ovens temperatures and converters temperature are readable on the display and transmitted through the RS232 remote interface.



### Functioning principle:

The basic configuration of the **SONIMIX 6000C1** is mainly composed of 2 parts :

- a binary gas dilutor, based on high precision mass flow controllers and mechanical pressure regulators, with glass dilution chamber and fluidics for perfect homogeneity. Input pressures monitored by two pressure switches.
- an interface, based on the 80537 micro-controller, able to receive and execute the instructions emitted by the monitors or a compatible data acquisition system; instructions transmitted by RS232 or materialised by closed or opened relays; the power supplies for the valves, the keyboard and the 2 X 20 characters fluorescent display.

- No cylinders**
- Accurate**
- Flexible**

### Applications



The **MULTIPOINT MULTIGAS CALIBRATOR**, model **LNI SONIMIX 6000C1** is an instrument designed to calibrate manually or by remote control up to 5 gas monitors installed in an Air pollution monitoring station, such as SO<sub>2</sub>, HC or BTX, CO, NO<sub>x</sub> and O<sub>3</sub>.

With the **optional GPT** circuitry it is possible to verify the coherence of NO, NO<sub>2</sub> and O<sub>3</sub> measurements, and to determine the converter's efficiency of the NO<sub>x</sub> analyser

## Specifications

Carrier gas	High grade zero air from pressurised cylinders or from Sonimix 3052/3057
Diluted gases	Mixtures of : SO <sub>2</sub> in air (25 to 100ppm), NO in N <sub>2</sub> (25 to 100ppm), CO in air (1000 to 10000ppm), HC or BTX in air
Total outflow of mixture	About 3500 Nml/min (other values upon request)
Flow of carrier gas	0 to 3500 Nml/min air
Flow of diluted gas	0 to 35 Nml/min air
Dilution ratio range	1/1000 to 1/30
Flow generation accuracy and linearity	Better than 0.5% FR, due to recorded response curve and calculations
Repeatability of flow generated	Better than 0.2%
Stabilisation time of mixtures	< 1 min
O <sub>3</sub> concentration	Between 50 and 500ppb, adjustable by software, remote & local (other values upon request)
Repeatability of O <sub>3</sub> concentration	Better than +/- 2ppb (at 200ppb O <sub>3</sub> )
Temperature of permeation tube oven	45°
Temp. Stability of permeation tube oven	0.05°C
SO <sub>2</sub> » permeation tube	100 to 500 ppb (standard values)
NO » permeation tube	100 to 500 ppb (standard values)
BTX permeation tube	10 to 50 ppb (standard values)
Remote command signals	16 up to isolated digital input channels, 8 dry relay output channels &/or bi-directional RS232 communication (to be defined when ordering)
Alimenting pressures	2.5 +/- 0.3 bar (35+/- 5 psig)
Operating temperature	5 to 40° C
Operating altitude	From sea level to 4000m
Gas connections	By 1/4" and 1/8" Swagelok fittings
Power consumption :	200 Watt
Power requirements :	230V/50-60Hz - 115V/60Hz - 100V/50-60Hz
Dimensions [cm] :	19" 3HE/84 TE , 500mm deep / portable casing in option
Shipping Dim [cm] :	41x51x50 (WxDxH)
Net weight [kg] :	15 to 20 Kg depending on model
Shipping weight [kg]:	17 to 22 Kg depending on model

## Options – Accessories – Spare parts

### Models:

Calibrator with 2 MFC, 1 diluted gas inlet, 5l/min air dilution flow & 50ml/min diluted flow

### Options:

	Module for 4 gases inlet (3 additional inlets)
	Ozone generator from 50 to 500 ppb and circuit for GPT
	1 permeation oven in Teflon for 1 tube
	1 permeation oven in Stainless steel for 1 tube
	2 permeation oven for 1 tube
	3 permeation oven for 1 tube
	4 permeation oven for 1 tube
	1 permeation oven for 6 tubes maximum
	1 NO <sub>2</sub> permeation oven with NO <sub>2</sub> -> NO converter,
	Remote interface by dry relays
	Remote interface by serial RS232
6709 00 300	PC software program to drive the Sonimix 6000 C1
6800 10 000	Portable casing
6700 13 867	Voltage 230V/50-60 HZ
6700 13 868	Voltage 150V/60 HZ
6700 13 869	Voltage 100V/60 HZ

### Consumables:

6704 08 551	Set of inlet filters
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