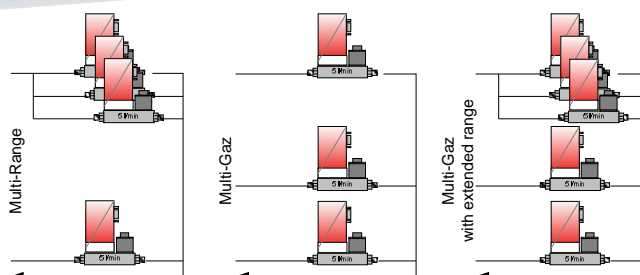




Sonimix 7100 Gas Mixer



KEY BENEFITS

- **Flexibility** - Large operation capabilities , up to 6 lines (5 source + 1 balance) with 3 concentration decade each
- **Accuracy** – Calibration of MFC's with any gas, higher accuracy than working with single gas conversion factors
- **Wide dilution range** – From 01.% to 100%
- **Proven metrological performances** – Calibration in our ISO 17025 accredited laboratory before delivery and during the entire lifetime of the instrument
- **Ergonomics** - Large color display with touch screen interface, same interface replicated on remote PC's, learn only once
- **Connectivity** - Ethernet, Wi-Fi, USB, for remote control and USB data transfer
- **Return on investment** – Reduce gas cylinders costs by generating your own mixtures
- **Performances** – Quick line purge reducing the stabilization time when applying high dilution ratios
- **Regulations compatibility** - Design according to ISO 6145-6. Exceeds requirements of the US EPA 40 CFR Part 51 Method 205 Appendix M.
- **Audit trail** – All device operations and gas mixtures generation available on the USB port for further needs
- **Safety** - Smart purge routine removes toxic compounds on the entire gas path
- **Auto-Diagnostic tools** - Status control of valves and MFC's by direct simulation
- **Expandability** – software update without losing the device configuration

APPLICATIONS

The **Sonimix 7100** is dedicated to the following applications:

- Calibration of gas monitors / sensors
- Interference analysis of gas monitors
- Fulfillment of the ISO 14481 norm CEM (QUAL 1 to QUAL 3)
- Performing quality control of gas monitors in the laboratory
- Generation of gas mixtures for R&D purposes

DESCRIPTION

The **Sonimix 7100** is based on the principle of gas stream through Mass Flow Controllers (MFC) and is built according to the ISO 6145-7 normalization. The benefits of this widely used technology are given by the combination of the measurement and the control of the gas flow.

Accurate mixing calculations are based upon the internal database of thermodynamic gas constants and the gas sources used, which can be also a mixture of several gases. Mixing sequences and device configurations can be done manually, automatically or remotely from the front panel, via RS 232 and Ethernet.

All data related to gas sources, mixtures "recipes" and scenarios are stored in the non-volatile instrument memory.

The device is available in different variants declined from three main versions.

First, the Sonimix 7100 Multi-range gas mixer performs a large range of gas mixtures from high concentration gas cylinders :

- Sonimix 7100 2L1R – from 10% to 100%
- Sonimix 7100 2L2R – from 1% to 100%
- Sonimix 7100 2L3R - from 0.1% to 100%

The SONIMIX 7100 Multi-gas is able to mix up to 6 independent gas sources simultaneously. Finally the Multi-gas is also available with extended ranges.

Each MFC is factory calibrated in 10 points by a traceable primary standard.

Each instrument is calibrated (option) into our ISO 17025 accredited laboratory and a report is provided with uncertainty calculations. In this way the device can be easily linked with National Standards (NIST, METAS, UKA, etc).

Specifications

Dilution unit

Dilution range :	10% to 100%, 1% to 100%, 0.1% to 100% (other dilution ranges upon request)
Dilution principle :	Mass Flow Controller (according ISO 6145-7)
Accuracy on concentration :	< 1% relative
Repeatability on concentration :	Better than 0.2% FS
Gas inlet requirements	Dilution gas: requires dry (-40°C DP) Air, Nitrogen or other gas, 2 ports Pressure: 3 ± 0.2 bar rel Fittings: Swagelok 1/4"
Gas outlet specifications:	Flow: 3.5 ± 0.25 L/min or 5 ± 0.25 L/min (other flow rate upon request) Pressure: atm + 200 mbar (other pressure upon request) Fittings: Swagelok 1/4"
Auto Diagnostic :	Solenoid valves test
Factory calibration :	By laminar flow with uncertainty < 0.2% of reading or 0.02% full scale, whichever is greater
Operation :	Continuous dilution
Response time :	< 60 sec
Warm up time :	< 45 min
Interfaces :	LCD touch pad graphic display VGA 640 x 480
Communications :	RS 232 , Ethernet TCP/IP, USB (Audit trail of device operation and mixtures generated, soft update)

Electrical specifications

Power consumption :	Max 150 [Watt]
Power requirements :	230V/50-60Hz - 115V/60Hz - 100V/50-60Hz

Physical specifications

Operating temperature:	15°C - 40°C
Dimensions [cm] :	19" 3HE/84 TE , 500mm deep / portable casing in option
Net weight [kg] :	18 to 22 Kg depending on the model

Models - Options – Consumables

Sonimix 7100 models numbering : 6900 0AA BB

AA = model and range type		BB = total flow
2 Lines Multi Range	Multi Lines	
<input type="checkbox"/> 31 = 2L1R - 10% to 100% <input type="checkbox"/> 32 = 2L1R - 1 to 10% <input type="checkbox"/> 33 = 2L1R - 0.1% to 1% <input type="checkbox"/> 34 = 2L2R - 1% to 100% <input type="checkbox"/> 35 = 2L2R - 0.1% to 10% <input type="checkbox"/> 36 = 2L3R - 0.1% to 100%	<input type="checkbox"/> 4X = 3 Lines <input type="checkbox"/> 5X = 4 Lines <input type="checkbox"/> 6X = 5 Lines	<input type="checkbox"/> X=0 : no range extension <input type="checkbox"/> X=1 : L1 extended range <input type="checkbox"/> X=2 : L1 twice extended range <input type="checkbox"/> X=3 : L2 extended range <input type="checkbox"/> X=4 : L1 and L2 extended range <input type="checkbox"/> X=5 : L1 twice extended range + L2 extended range
		<input type="checkbox"/> 00 = For Multi Lines <input type="checkbox"/> 35 = Total flow 3.5NI/min <input type="checkbox"/> 50 = Total flow 5NI/min

Options:

- Optional 4 additional inlets
only for 2LXR and L1 L2 and L3 on Multi-lines
- ISO 17025 calibration and report
- Portable casing

Consumables

- Set of inlet filters (2 pces)

Power

- Voltage 230V / 50/60 Hz
- Voltage 117V / 50/60 Hz

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