MIX-2000 Digital Gas Mixer

Applied Analytics Data Sheet No. DS-901A

Highly automated digital gas mixer.

The MIX-2000 Digital Gas Mixer uses thermal mass flow controllers for accurate, repatable production of complex gas mixtures. Designed for use by scientists and lab personnel, this device ships with a compact notebook PC loaded with MIX control software. The MIX-2000 enables you to mix up to 5 different gases simultaneously with no manual calculations.

Features

- » Automates gas mixtures that are accurate and repeatable using digital thermal mass flow controllers
- » Mixes up to 5 different gases simultaneously
- » User-defined dynamic mixing sequences with time-based routines
- » Ideal for analyzer calibration, process simulation, CEMS testing, and countless other applications

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Product History

Applied Analytics first developed the mixer device as a tool for easily producing our own analyzer calibration gases. The device proved highly reliable, so we marketed it as a solution for other companies with similar needs.

The MIX-1000 was launched in 2005. Since then, we have refined the design and incoporated features like automatic mix scheduling and dynamic time-based routines.

2005

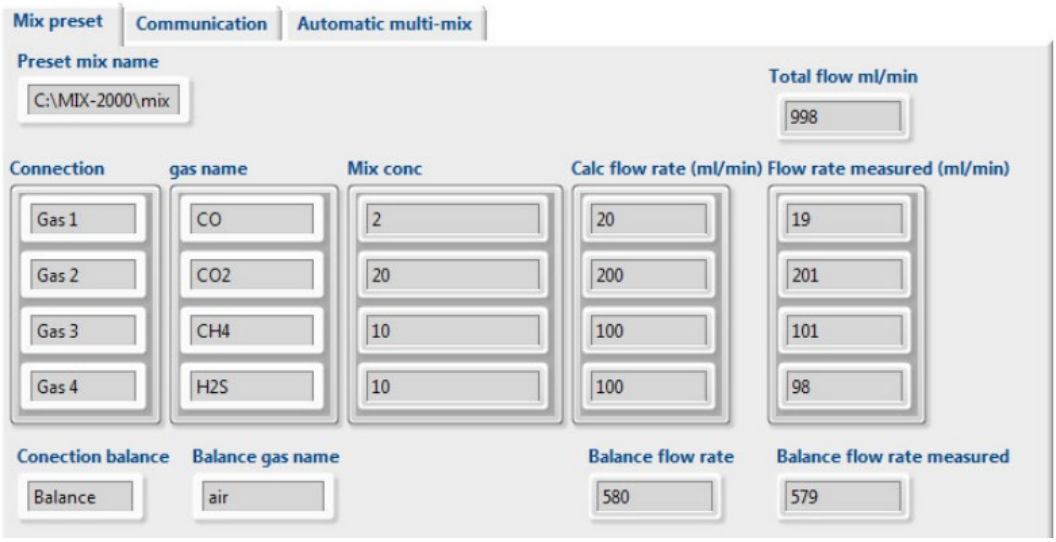
2012

Dead-Simple Setup

The gases to mix are connected at the back of the mixer, where 5 inputs are available:

PC to MIX-2000 Control

The MIX-2000 ships with a pre-configured notebook PC to provide a control interface for the device. The MIX-2000 connects to the PC via USB cable.



Creating a new mix preset is as easy as defining the gases and their desired concentrations. The MIX Software will calculate the necessary flow rates with correction coefficients for each gas.

Mix presets can easily be saved to the local drive for later use. Due to the Windows interface, the software allows an unlimited library of mix presets, storage permitting.

Subject to modifications. Specified product characteristics and technical data do not serve as guarantee declarations.

Technical Data	
General	
Gas Flow Control Technology	Digital Mass Flow Controller
Channels	2-5 input channels; 1 output channel
Controllable Gases	136 built-in gas correction factors; additional custom gases can be added by the user
Response Time / Control Time	10s/100ms
Accuracy	± (1.5% of reading + 0.2% of full scale) per flow controller
Repeatability	± 0.5% of full scale (per channel)
Calibration	factory calibrated
Measurement Dynamic Range	1% to 100% of full scale
Scope of Supply	
MIX-2000 Digital Gas Mixer	-aluminum desktop enclosure containing up to 5 digital mass flow controllers -backpanel configured for connection of up to 5 gases via 1/4” compression tube fittings -front panel configured for 1 output gas mixture via one 1/4” compression tube fitting -electrical power cord
Notebook PC	-Windows™ 7 (or later) -MIX-2000 Software -communication cable for interfacing with the MIX-2000 -electrical power cord
Hardware Specifications	
Wetted Materials	Stainless steel type 316; Viton
Communication	Via serial / USB interface to included Notebook PC
Electrical Requirements	100 to 240 VAC 47 to 63 Hz
Power Consumption (mixer)	Minimum: 15.2 Watts Maximum: 36 Watts

Headquarters
Applied Analytics, Inc.
Burlington, MA | sales@aai.solutions

Asia Pacific Sales
Applied Analytics Asia Pte. Ltd.
Singapore | sales@appliedanalytics.com.sg

India Sales
Applied Analytics (India) Pte. Ltd.
Mumbai, India | sales@appliedanalytics.in

North America Sales
Applied Analytics North America, Ltd.
Houston, TX | sales@appliedanalytics.us

Middle East Sales
Applied Analytics Oil & Gas Operations, L.L.C.
Abu Dhabi, UAE | sales@appliedanalytics.ae

Europe Sales
Applied Analytics Europe, AG
Genève, Switzerland | sales@appliedanalytics.eu

Brazil Sales
Applied Analytics do Brasil
Rio de Janeiro, Brazil | vendas@aadbl.com.br