Highly automated digital gas mixer.

The MIX-2000 Digital Gas Mixer uses thermal mass flow controllers for accurate, repeatable 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
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 incorporated features like automatic mix scheduling and dynamic time-based routines.

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.
# MIX-2000 Digital Gas Mixer

**Applied Analytics Data Sheet No. DS-901A**  
**Revised 14 April 2017**

## Technical Data

<table>
<thead>
<tr>
<th><strong>General</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Flow Control Technology</td>
<td>Digital Mass Flow Controller</td>
</tr>
<tr>
<td>Channels</td>
<td>2-5 input channels; 1 output channel</td>
</tr>
<tr>
<td>Controllable Gases</td>
<td>136 built-in gas correction factors; additional custom gases can be added by the user</td>
</tr>
<tr>
<td>Response Time / Control Time</td>
<td>10s/100ms</td>
</tr>
<tr>
<td>Accuracy</td>
<td>± (1.5% of reading + 0.2% of full scale) per flow controller</td>
</tr>
<tr>
<td>Repeatability</td>
<td>± 0.5% of full scale (per channel)</td>
</tr>
<tr>
<td>Calibration</td>
<td>factory calibrated</td>
</tr>
<tr>
<td>Measurement Dynamic Range</td>
<td>1% to 100% of full scale</td>
</tr>
</tbody>
</table>

## 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 |

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