

# Flow Measurement & Control

## Mass Flow Equipment

## Introduction

MATHESON mass flow controllers and mass flow meters are among the most sophisticated flow sensing and control systems available. Complete systems can be made by combining the mass flow controllers / meters, with our digital single or four channel control boxes.

If the transducer or system is used only to indicate flow, it is considered a mass flow meter. If the transducer or system is used in conjunction with a reference signal and a controlling valve, the transducer or system is considered a mass flow controller.

MATHESON's **8284A** four channel **Dynablender-Plus** controllers, used in conjunction with additional mass flow controllers or mass flow meters, are designed to read and control up to four individual mass flow controllers, and to prepare accurate mixtures of different gases.

MATHESON's **827A** single channel control box / readout / power supply, used in conjunction with an additional mass flow controller or mass flow meter, is designed to control individual mass flow controllers, or monitor individual flow meter transducers.

### Flow Meter and Controllers

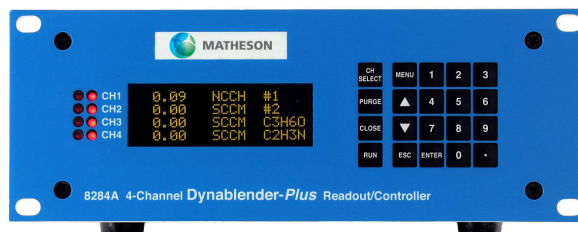
If the transducer is used only to indicate flow, the unit is considered a mass flow meter. If the transducer is used in conjunction with a reference signal and a control valve, the unit is considered a mass flow controller.

MATHESON's **829 Series Mass Flow Controller** consists of a flow transducer that senses the flow of the gas, and an electronically linked control valve.

- Accuracy is  $\pm$  (0.8% of reading + 0.2% of full scale)
- The LCD display shows gas, flow rate, temperature, set point, pressure
- The front panel controls allow gas changes and interface settings
- Includes Totalizer/Batch function

MATHESON's **819 series Mass Flow Meter** consists of a flow transducer that senses the flow of the gas.

- Accuracy is  $\pm$  (0.8% of reading + 0.2% of full scale)
- The LCD display shows gas, flow rate, temperature, set point, pressure
- The front panel controls allow gas changes and interface settings
- Includes Totalizer function



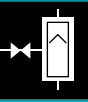
8284A Mass Flow Four Channel Controller



827A Single Channel Controller / Monitor



829 Series Mass Flow Controller



## Mass Flow Product Overview

Application	Features	Specifications	Function
<b>819 Mass Flow Meters</b>			
<b>Application:</b> High accuracy flow Measurement of non-corrosive gases. From 0-5 sccm up to 0-20 slpm	<b>Includes:</b> <ul style="list-style-type: none"> <li>• 0-5 VDC output signal</li> <li>• Swagelok connections standard</li> <li>• Threaded mounting holes in body</li> <li>• RJ-45 connector</li> <li>• Totalizer/Batch function</li> </ul>	<b>Accuracy:</b> • $\pm 0.8\%$ of reading +0.2% of full scale <b>Repeatability:</b> • $\pm 0.2\%$ full scale	<b>Function:</b> Use to monitor flow rate.
<b>829 Mass Flow Controllers</b>			
<b>Application:</b> High accuracy flow Control of non-corrosive gases. From 0-5 sccm up to 0-20 slpm	<b>Includes:</b> <ul style="list-style-type: none"> <li>• 0-5 VDC output signal</li> <li>• Swagelok connections standard</li> <li>• Threaded mounting holes in body</li> <li>• RJ-45 connector</li> <li>• Totalizer/Batch function</li> </ul>	<b>Accuracy:</b> • $\pm 0.8\%$ of reading +0.2% of full scale <b>Repeatability:</b> • $\pm 0.2\%$ full scale	<b>Function:</b> Use to monitor and control flow rate.
<b>8284A Dynablender-Plus Four Channel Control Box</b>			
<b>Application:</b> Gas flow monitoring, control and blending	<b>Includes:</b> <ul style="list-style-type: none"> <li>• 4 channels with OLED display</li> <li>• All four channels display simultaneously</li> <li>• Built in totalizers for each channel</li> <li>• Control cables for transducers</li> <li>• 1/2 rack or bench mountable</li> </ul> <b>Required:</b> <ul style="list-style-type: none"> <li>• 1-4 829 / 819 controllers / meters</li> </ul>	<b>Accuracy:</b> • $\pm 1\%$ full scale	<b>Function:</b> Low cost blending of up to 4 gas streams for laboratory and process applications. It is not required to use all 4 channels, they may be reserved for expansion.
<b>827A Single Channel Mass Flow Controller / Meter, Readout / Power Supply</b>			
<b>Application:</b> Flow measurement and control	<b>Includes:</b> <ul style="list-style-type: none"> <li>• 827A digital readout power supply box</li> <li>• Control cable and connectors for 829 &amp; 819 controllers / meters</li> <li>• 1/8 DIN</li> </ul>	<b>Accuracy:</b> • $\pm 1\%$ full scale	<b>Function:</b> Monitoring or control of a single gas flow. Use with 829 / 819 controllers and meters.