# Reliable Air Delivery for Automated Liquid Paint Application

**Robotic painting**, one of the sectors within the Coatings Industry, has several applications in which mass flow is critical to paint application and control. In a typical application, paint is dispensed at the end of a robotic painting arm that articulates close to the surface, following the contours of the paint target (e.g. truck or car bodies). Spinning bells and pressurized guns are the final step in dispensing of the paint.

The liquid paint is atomized using a jet of air. The ratio of air to paint affects the atomization of the spray pattern, its consistency in application and the overall finish. The control of shaping air is critical to control of the pattern.

Maintaining accurate, repeatable and fast response control over the air flow is essential to the overall paint job quality and minimizing over painting, thereby reducing costs on every part painted.

Alicat Scientific has products both for use in automated paint applications and as field tools when installing or trouble shooting an existing system.

The multiple parameter outputs of Alicat instruments, either via RS-232 or secondary analog, are available for integration into the PLC operating parameters. This information can be used within the PLC to provide additional functions and to eliminate the cost of additional components.

For example, monitoring line pressure can be critical to proper operation of the robots and for an early indication of a failure in the delivery system. The Alicat mass flow meter's pressure signal eliminates the cost and maintenance of a separate pressure gauge.

To further facilitate the use of these units as a replacement component, they may also be configured to provide a secondary parameter via an independent, digital or analog output signal.

**The most popular models for this use are:**

**M Series Meters:**
Guns: M-250SLPM-D-I /5CM
M-500SLPM-D-I /5CM
Bells: M-500SLPM-D-I /5CM
M-1000SLPM-D-I /5CM

**MCR Series Controllers:**
MCR-250SLPM-D-I /5CIN
MCR-1000SLPM-D-I /5CIN