

# Micro Motion® Coriolis Flowmeters Increase Productivity in Polyurethane Production

## RESULTS

- Increased productivity by 50%
- Reduced reject rate from 15% to near zero
- Cost savings of \$50,000 per year
- Payback in three to four months



## APPLICATION

A manufacturer combines two or more components, which react to produce polyurethane foam. Maintaining a precise mole or mass ratio of these components is critical to the quality of the end product. These ratios affect the density of the foam in addition to other product properties.

## CHALLENGE

Volumetric metering had not been satisfactory for this application due to the variations in component density as well as the possibility of developing entrained vapor bubbles in the fluid stream. These variations could result in an improper mass ratio of components being mixed, producing foam that did not meet specifications.

Foam that is “off spec” cannot be recycled and must be discarded. Product rejects resulted in a substantial and unacceptable “cost of quality” for the manufacturer.

## SOLUTION

The manufacturer replaced the volumetric meters with Micro Motion® Coriolis flowmeters. Micro Motion Coriolis meters measure mass flow and density directly, and so are insensitive to the kind of variability that plagues volumetric technologies.

*Micro Motion meters are insensitive to the variability that plagues volumetric meters.*

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The Micro Motion integrated transmitter and applications platform that was selected for this installation provides precise batch control and continuous monitoring of flow rate and total, density and temperature.

In a short time, the Micro Motion mass flowmeters were found to have increased productivity by 50% while reducing the reject rate from 15% to near zero. The manufacturer calculated that this saved approximately \$50,000 per year.

The payback period on the installation of the Micro Motion meters in this installation was three to four months. The company's ability to produce polyurethane foam efficiently with lower rejects gained it a competitive edge in the marketplace.

