

Brewery/Beverage Processes

Mass Flow Controllers Provide Precise Carbon Dioxide (CO₂) Injection

Precise mass flow control of carbon dioxide (CO₂) is a critical part of creating high quality brews and beverages during the beverage carbonation production process. It is pivotal that beverage manufacturers have the ability to control the exact quantity of carbon dioxide (CO₂) injected into their beverages during the bottling process.

Mass flow controllers (MFCs) are used to regulate and control the amount of CO₂ injected into the bottles during filling and capping to assure uniformity of the product (See Figure 1).

Too much CO₂ in the beverage will lead to an overly carbonated beverage and could possibly break bottles causing safety issues and loss of product. While too little CO₂ may cause the beverage to be “flat.” In either situation, the batch would need to be tossed, affecting productivity and costs.

Why Mass Flow?

Many companies use **volumetric flow** and differential pressure devices for **gas flow control** for their CO₂ injection process. However, volumetric flow devices are not a suitable option for this application given their sensitivity to heat and pressure fluctuations. Direct mass flow devices, like the MaxTrak® 180 industrial flow controller, have overcome these shortcomings and demonstrate precise accuracy by counting and controlling every gas molecule flowing through the instrument to achieve unmatched precision.

MaxTrak Benefits for CO₂ Injection

MaxTrak 180 industrial flow controller, part of the SmartTrak family, meets key requirements of the brewery/beverage industry with its precision, NEMA 6 & IP7 ratings, remote monitoring capability and rugged washdown protection. Since MaxTrak is a direct mass flow controller, it is unaffected by upstream gas temperature and pressure fluctuations and provides smooth, stable, accurate, and repeatable **CO₂ gas mass flow control** that you can rely on every time.

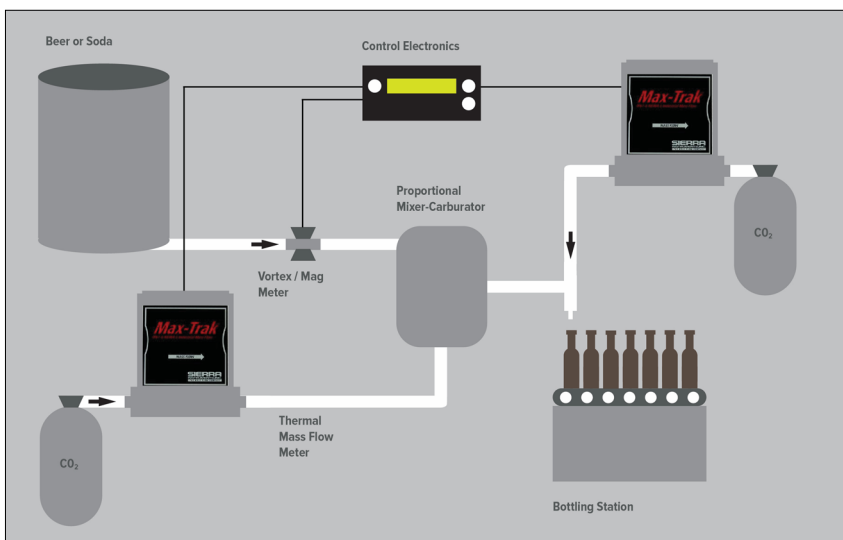


Figure 1: CO₂ Injection for Beverage Industry



Figure 2: MaxTrak™ 180 Mass Flow Controller for CO₂ injection for beverage industry

- High accuracy: +/- 0.5% of reading
- Accuracy: +/- 1% of reading
- Repeatability: +/- 0.2% of full scale
- Meet industrial MFC requirements with NEMA 6 & IP67 ratings
- Increase efficiency with true, digital high-performance
- Make adjustments in the field for time savings
- Configure up to 10 gasses with one instrument

Learn more about MaxTrak:
sierrainstruments.com/180

Watch video.
sierrainstruments.com/ancient-beer-process-meets-the-future