

Brewery/Beverage Processes

Mass Flow Controllers Provide Precise Carbon Dioxide (CO₂) Injection

In beverage production process, precise mass flow control of Carbon Dioxide (CO₂) is a crucial part of creating high quality brews and beverages. It is pivotal that beverage manufacturers have the ability control the exact amount of carbon dioxide (CO₂) being 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 result in an overly carbonated beverage, and could possibly break bottles causing a plant safety issue and loss of product. While an inadequate CO₂ injection will cause the beverage to be “flat”. In either situation, the batch would need to be tossed out resulting in a loss of product which costs the company countless dollars in revenue and ultimately hurts profit margins.

Many companies use volumetric flow and differential pressure for gas flow control for their CO₂ injection process. However, volumetric flowmeters are not suitable for this application because of the widely varying mass flow requirements encountered in start-up and low production periods. Direct mass flow with thermal mass flow controllers like the MaxTrak 180, part of the SmartTrak family, provides smooth, stable, accurate, and repeatable CO₂ gas mass flow control you can rely on, every time. In essence, counting and controlling every gas molecule flowing through the instrument to achieve unmatched precision. Unaffected by upstream gas temperature and pressure fluctuations, gas mass flow control is direct and unequivocal.

MaxTrak meets industrial MFC requirements with NEMA 6 & IP7 ratings and provides the robust, smooth mass flow control required for the brew and beverage process industry.

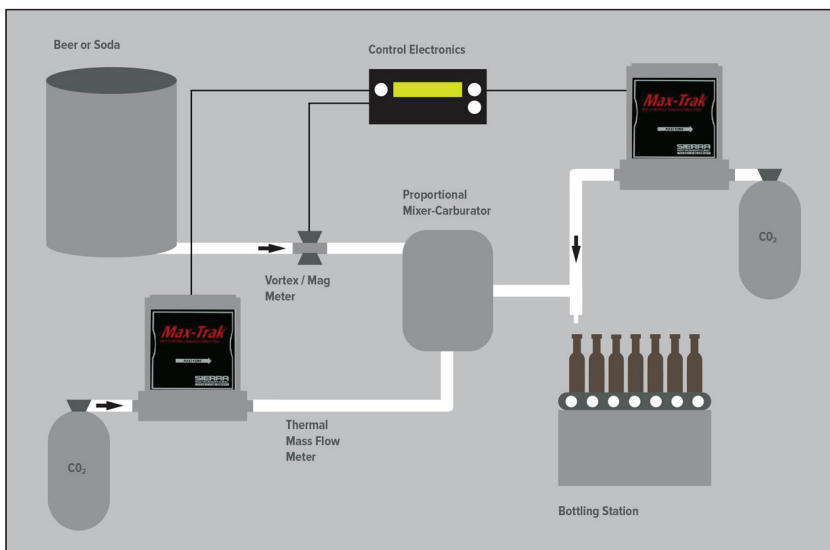


Figure 1: CO₂ Injection for Beverage Industry



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 at:

sierrainstruments.com/co2injection