

# Colorado Craft Brewer Uses Fork Density Meter to Continuously Monitor Fermentation

## RESULTS

- Eliminate manual sampling of fermentation process
- Achieve batch to batch consistency
- Effectively utilize and optimize fermentation tanks
- Achieve optimal yeast health



## APPLICATION

Fork Density Meter (FDM) in Beer Fermentation Monitoring

## CUSTOMER

Colorado Craft Brewer

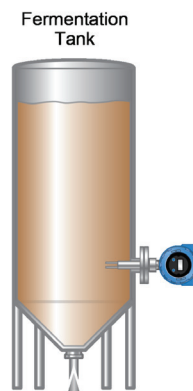
## CHALLENGE

A craft brewer has more tasks to do in a day than there is time to complete them. The manual sampling process to monitor beer fermentation is time consuming (10-15 minutes for each sample), can be inaccurate and have variability. In addition, sampling is not a continuous process and poses a risk of contamination. During busy schedules, a manual sample is often skipped or delayed. However, not having visibility into the fermentation process can lead to unforeseen problems. A beer that ferments too quickly or too slowly can lead to unfavorable and inconsistent flavors, as well as pose the risk of a contaminated batch, which leads to wasted raw materials, time, and potential revenue. Additionally, the access point for taking a manual sample could be high above the ground and pose a potential safety issue to personnel.

## SOLUTION

The Micro Motion Fork Density Meter (FDM) was installed with direct insertion into the fermentation tank of a Colorado craft brewer. The FDM enabled continuous measurement and real-time monitoring of the fermentation process for density (with  $\pm 1$  kg/m<sup>3</sup> accuracy), Specific Gravity, degrees Plato concentration (with  $\pm 0.2$  °Plato concentration accuracy), and temperature. The continuous measurement with the FDM removed the need for manual sampling of the fermentation process, which saves time and adds visibility into how each fermentation is tracking. In one instance, the craft brewer was alerted that a specific beer was fermenting too quickly. They

Knowing exactly how the fermentation process is tracking is invaluable



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were able to readjust the temperature control set-point and were still able to dry-hop at the appropriate degrees Plato or Specific Gravity target, effectively saving the batch from being wasted and saved the potential revenue from the beer and the associated lost revenue. Catching this event would not have been possible with the previous manual sampling process. Installing the FDM for continuous fermentation monitoring led to a payback of less than one year for the craft brewer.



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