

Success story

Industry: Food & Beverage

PLC
+ HMI
ALL IN ONE™



The Vision1210 greatly increased our capabilities and consistency in our brewery!



How can local breweries achieve the consistency of national changes? PLC control helps 7th Settlement solve the problem

Summary:

For small, local breweries, it can be difficult to achieve the exacting consistency customers are used to from national brands. The 7th Settlement Brewery, a community-supported brewery in Dover, NH, wanted to install an automated control system to achieve the best possible consistency in their beers. They designed a control platform

using a Unitronics Vision1210 and a Vision120 all-in-one PLC, which do everything from automating pumps, monitoring temperature and logging recipes and other data. Not only are 7th Settlements results more consistent, they have also reduced their brew time; working with Unitronics helped increase both the brewery's quality and its productivity.

The 7th Settlement Brewery is the first of its kind in Dover, NH, a community-supported, farm-to-table brew pub. Inspired by the regions history and community, 7th Settlement proudly supports its local economy by offering the public delicious, socially and environmentally responsible beer. In order to make this goal a reality, the founders of the 7th Settlement had to build assemble their own brewing system, including a PLC that could monitor and automate various parts of the brewing process.

Owner and founder Joshua Henry needed a control system that could support temperature measurement in three, 800 gallon fermenters, record batch data, and automate their circulation pump, transfer pump, and 300,000BTU boiler. Josh also needed to be able to monitor the system remotely and receive notifications offsite if any alarms were triggered. He selected the Unitronics Vision1210 and Vision120, all-in-one PLCs with integrated HMI panels. From one central location, these controllers allowed Josh to control I/O, monitor current temperature and history, and store data during the entire brew process. In addition, the controller's RS485 communications greatly reduced wiring across the brewery to remote PID control of the glycol chilled fermenters.

Each brewing cycle has multiple functions to manage the two pumps, and boiler, along with a large section devoted to the trend image and time in the recipe step. The Vision1210's 12-inch color-touch display made it easy to accommodate this versatile operation, enabling the operator to control the necessary local I/O through the interface. The Vision120 was primarily used as a Modbus RTU slave across the brewery to control a bank of solid state relays that open and close the chiller valves. Both PLC were programmed using Unitronics VisiLogic software; this all-in-one software allowed 7th Settlement to program the PLC, HMI screens, I/O and communications in a single environment, making it efficient and user friendly.

PLC control resulted in a substantial simplification of the brewing process, which in turn lead to reduced brewing time, improved record keeping, and ultimately lower production costs. Josh Henry raves that the Unitronics Vision1210 "greatly increased our capabilities and consistency in our brewery! Not only has it simplified our brewing process, it has legitimized our brewery to our customers in our pub!"

