



“Accuracy, Efficiency, Automation – It’s at the Core!”

Bakery Flow Meter Controls



PROJECT DETAILS

Project Name

Bakery Flow Meter Controls

Location

Sacramento, CA

Project Type

New and Retrofit

Installation

New Flow Meters and Custom
Designed Operator Controls

Equipment Installed

Control Enclosure, Allen-Bradley
Compactlogix, Touch Screen HMI

Network

Ethernet

Total System Points

~90

PROJECT DESCRIPTION

A large bakery in the Sacramento area utilized several generations of flow meters and controllers to monitor and control component delivery of liquid components for each of their bread mixers. These devices had been integrated over time, therefore implementation of an overall metering scheme located the flow controllers and operator interfaces ‘wherever space was available’, usually not adjacent to the bread mixer to which it feeds - not an ideal set-up for an industrial system of this scale.

Core designed and fabricated a single host control panel, and operator control stations which incorporated a touch screen and associated hardware/software that monitors and controls eleven (11) flow meters and their associated control valves. The control panel was designed with the ability to be easily expanded with minimal hardware/wiring changes to incorporate an additional five (5) flow meters over time. Customized software was developed and installed for three (3) touch-screen operator control stations and the PAC controller contained in the host control panel to provide a fully functional system. The new PAC controller interfaced directly with the flow meter transmitters and control valve hardware, providing full monitoring and control capabilities without the need for a separate batch controller from the flow meter manufacturer.

With several aspects of the existing system undefined, Core conducted an in-depth review of the host and operator control enclosure mounting locations with the client. In addition, wiring paths and conduit runs from the host control panel to flow meters and control valves, to minimize conduit lengths and wall penetrations.

Core fabricated the host control panel, testing electrically to assure all points within enclosure operate as designed and intended; parallel to this, software (PAC controller and touch screen HMI) were developed and intelligent hardware components configured, and tested. Complete electrical and block diagrams were drafted, and complemented with thorough testing of the installed system and comprehensive training for staff.