

New KE2 Adaptive Control Expands KE2 Therm Controller Line

THE CATALYST: According to Jeff Kavanagh, V.P. of Sales and Marketing at KE2 Therm, the decision to develop the KE2 Adaptive Control was based on customer requests for an energy saving controller solution, that was feasible for smaller applications too. "We found a group of customers that needed energy savings, but also something ultra-simple to install, and that didn't require Ethernet communication."

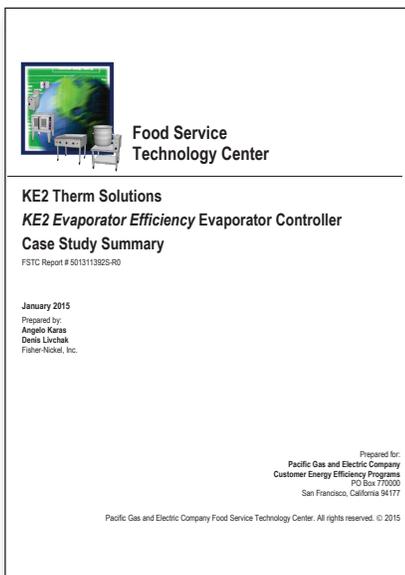
THE STARTING POINT: "Using our KE2 Low Temp + Defrost, which replaces both a time clock and thermostat, as the basis for the controller, we then integrated the adaptive (demand) defrost algorithm found in our flagship product, the KE2 Evaporator Efficiency controller," explained Doug Brinkmann, Business Development Manager and lead programmer at KE2 Therm.

THE RESULTS: Kavanagh summarized, "The KE2 Adaptive Control, which launched this month, is a simple energy saving adaptive defrost controller, that incorporates all of the features of the KE2 Low Temp + Defrost, and the energy saving defrost found in the KE2 Evaporator Efficiency controller. The demand defrost algorithm we've developed is third party verified to provide over 15% energy savings in most cases." The KE2 Adaptive controller also includes Title 24 fan control, audible and visual alarming, Modbus communication and two digital and two configurable inputs. In addition to the controller, the kit (pn 21177) comes with 3 color-coded 15' sensors to easily identify wiring, and a terminal board to clarify proper wiring.



Further information is available in Bulletin B.1.6 which contains general product information, or in the Quick Start Q.1.35 with detailed information on installation, menus, alarms, etc.

California Electric Utility Study Confirms KE2 Evap Energy Savings



The Food Service Technology Center (FSTC) of Pacific Gas and Electric Company in California and Fisher Nickel tested the KE2 Evaporator Efficiency (KE2 Evap) controller's energy saving merits for their Customer Energy Efficiency Programs.

FSTC's ever-increasing interest in technologies that reduce refrigeration energy consumption and optimize system performance, led them to test the KE2 Evap as a replacement for conventional mechanical control components.

The evaluation was conducted on a case-study basis using the FSTC's 50-sq.ft. lab-use, walk-in freezer to compare the energy use and performance of the pre-existing mechanically-controlled system to that of the retrofitted system using the KE2 Evap controller. Energy consumption was recorded using a logger installed in the

electrical service panel, and refrigeration temperatures were recorded using the KE2 Evap's on-board logging capability.

The testing spanned a six month period, in an effort to normalize the varying operating conditions and usage patterns of the test freezer.

The Fisher Nickel study showed that the application of the KE2 Evap controller resulted in substantially fewer defrost cycles, and an appreciable reduction in energy use. Defrost frequency decreased from three per day to an average of one every 30 hours, and the evaporator and condensing unit combined energy use decreased 6.3 kWh/d a (15.6%) reduction.

An added benefit of the KE2 Evap was an elimination of ice build-up within the freezer interior.

The complete study is available at <http://fishnick.com/publications/appliancereports/refrigeration/>