

## SOUS VIDE COOKING USING A TEMPERATURE DATA LOGGER

### PERFECTING FOOD TEMPERATURES WITH A GRANT SQUIRREL SQ16 LOGGER



CAS DataLoggers supplied a temperature monitoring solution for a large caterer utilizing [sous vide](#) (French for ‘under vacuum’) cooking as part of their food preparation process. This increasingly popular style uses thick vacuum-sealed pouches to slow-cook food at below-boiling temperatures anywhere from half a day up to 3 days. Using sous vide, the business produces extra-tender meat including short ribs, chicken, and salmon as well as vegetables that keep their crisp texture. First, the food is vacuum sealed inside the pouches which are then placed in a water bath held at a precisely controlled temperature to

gradually cook them. The combination of the low temperature, typically in the range of 130 to 185F, plus the vacuum sealing allows the food to evenly cook and locks in the juices.

Although it produces delicious food, sous vide is a very demanding all-day process requiring accurate equipment to continually monitor the food’s core temperature. Health and safety are also paramount since the technique uses such low temperatures. The food is cooked until pasteurized, but the time this takes varies with the food’s shape and size. For example, the chef cooks a few salmon dishes at 54°C (130°F), so he has to periodically check the temperature to ensure that the meat is cooked thoroughly and safe to eat. He had heard about people using data loggers to monitor the sous vide process and called CAS to get more information.

## INSTALLATION:

CAS DataLoggers recommended the [Grant Squirrel SQ16](#) Data Logger to monitor their sous vide process in real time. The data logger features 8 input channels for use with a wide range of sensors including Type T and Type K thermocouple probes. CAS DataLoggers also supplied the kitchen with several Type T probes tipped with a needle point for easy insertion into the pouches. Staff cook these pouches inside a water bath which is set to the desired temperature. A [circulator pump](#) keeps the heated water moving to maintain a consistent temperature throughout the bath and cook the food more evenly. After removing the pouches, the chef then quick chills them in a refrigerator while still under vacuum to eliminate any chance of contamination and spoilage.



After placing the food within the vacuum pouches, the chef fixes foam tape to the top of each bag and sticks the needle probe through the foam into the thickest part of the meat. This way, the pouches retain their seal, and the food cooks while the thermocouple probes log the core temperature of the meat. Using the Grant logger, it's easy to monitor 2-3 pouches at a time during large orders and the wedding season.

## UTILIZATION:

The data logger is portable and lightweight so the chef can easily move it around to check the food's current temperature in the different baths. Its standalone battery operation means it can be left on the countertop for days to log the temperature inside the pouches while kitchen staff prepare other dishes. Staff can set up the logger with a delayed start to automatically start at a specific time allowing them to get everything prepared ahead of time. The Grant logger's internal memory stores millions of readings of data, easily enough for multiple runs.

The logger has built-in Bluetooth communications along with a mobile app allowing the

chef to monitor the temperatures from anywhere in the kitchen. The data logger comes with [SquirrelView](#) set-up and analysis software for PC, which makes it easy to configure the logger and view recorded data to fine-tune his sous vide process. The software's user-friendly, spreadsheet-style interface allows quick setup of the data logger, quick downloads, and direct export to Excel. Flexible data presentation allows the chef to quickly display and analyze real-time or historical data such as a line graph, bar chart, etc.

### **BENEFITS:**

The Grant data logger is easy to use and helps ensure that the caterer's product is high-quality. The supplied thermocouples are inexpensive and simple for staff to place into the pouches, while the logger is also ideal for providing health and safety assurances to regulators that the meat was cooked properly and free of health risks. Along with the logger and temperature probes, CAS DataLoggers also provided their catering business with [free technical support](#) so they could get up and running with their application.

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For more information on [Grant Data Loggers](#), or to find the ideal solution for your application-specific needs, contact a CAS DataLogger Application Specialist at **(800) 956-4437** or [www.DataLoggerInc.com](http://www.DataLoggerInc.com).