Consistency in Refrigeration Keeps Base Costs Cool

By George Huettel

Disaster Averted

How continuous alarm monitoring and resolution minimizes food inventory loss and maximizes labor efficiency

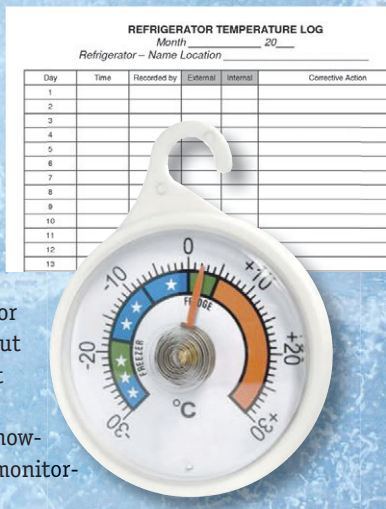
The average restaurant tallies nearly $840,000 in annual sales, according to the National Restaurant Association's 2013-2014 Restaurant Operations Report. And according to Deloitte, two-thirds of those sales, or $560,000, are spent on its two most controllable costs: food and labor.

The efficient management of labor and inventory—those two massive, yet controllable costs common to all restaurants—plays a pivotal role in foodservice success. Here, we'll consider an initiative that positively impacts both of these cost centers, while also helping restaurants obviate disaster. Refrigeration performance and alarm monitoring helps mitigate the expense associated with perishable inventory loss, while improving the efficiency of restaurant associates.

Efficient **24/7/365 performance** of refrigeration units is paramount for successful restaurant operations

Pitfalls Of Manual Refrigeration Monitoring

The contents of refrigeration units have obvious implications on a diner's experience, safety and, ultimately, the restaurant's profitability. Their efficient, 24/7/365 performance is paramount, not just for disaster preparedness, but for successful restaurant operations in general.



In many facilities, however, refrigeration unit monitor-

Left: Handwritten logbooks are difficult to analyze for refrigeration unit performance degradation. Top: An inventory loss would be a loss in customer confidence. Bottom: Third-party vendors offer a diverse range of services and features for refrigeration monitoring.

ing is a highly manual, error-prone and risky process. A common practice involves hourly or day-part manual checks of temperatures that are logged in a notebook. This approach is problematic on a number of fronts:

- Handwritten logbooks are difficult to analyze for refrigeration unit performance degradation, all but eliminating an opportunity for proactive maintenance.
- Refrigeration units are working even when associates are not. A manual approach to refrigeration monitoring leaves no recourse if the temperature in a walk-in cooler climbs to 80 degrees while the facility is unoccupied.
- Manual refrigeration monitoring is often a low-priority task for busy restaurant associates. Missed temperature checks are common, exposing restaurants to food safety risks and inventory losses.
- Requiring frequent, manual checks of refrigeration equipment is an inefficient use of labor resources. Over the course of a month, the task adds up to several hours of lost productivity per facility.

According to the National Restaurant Association, restaurants account for 47 percent of the food dollar in the United States. A manual approach to protecting the massive value of that perishable inventory isn't efficient, nor is it a sound disaster preparedness strategy.

The Case For Automated Alarm Monitoring

Modern facility and alarm monitoring systems offer a risk-mitigating alternative to manual refrigeration controls. In addition to quickly alerting management to refrigeration equipment temperature anomalies, today's third-party applications offer the advantage of proactive refrigeration equipment performance monitoring. These applications reach well beyond a quick glance at a thermometer in a freezer. They can continuously measure and report on additional parameters, such as ambient conditions, suction pressures, coil temperatures, compressor run status and overall energy usage.

> Typically restaurants have little more than **4 hours** to restore appropriate temperature settings before risking food loss.

By gathering this telemetry data, restaurants can identify refrigeration assets that aren't performing at their peak. Continuous monitoring reveals the potential for failure before high-margin inventory is lost, before refrigeration equipment requires costly repair and, often, without the need for on-site manual intervention.

Still, the benefits of remote refrigeration equipment performance and alarm monitoring is predicated on the restaurant's unique circumstances. Those circumstances might include:

- **The age and condition of equipment.** Should brand-new refrigeration units be monitored continuously? Do aging infrastructures require more aggressive monitoring?
- **The value of inventory and importance of food safety**. Is there $10,000 in prime rib and lobster in refrigeration units on any given day? What additional lost revenue, and lost consumer confidence, would the business suffer if it all went to waste—or worse—if it was served?

Service providers that can remediate refrigeration issues without the need to dispatch a service technician can save restaurants significant time and money.

- **The existing IT infrastructure.** Is there already an EMS in the facility? Can it be integrated, and to what benefit?
- **Labor efficiency.** How much efficiency can be gained by eliminating the several hours per week, or hundreds of hours per year, that employees spend monitoring refrigeration equipment temperatures?
- **Alarm types and escalation procedures for each.** What issues are considered "cause for alarm?" How long can those issues wait before resulting in the cost of complete equipment failure and/or complete inventory loss? Who is responsible for remediating each alarm scenario?

Evaluating Alarm Escalation

While remote alarm and equipment performance monitoring is an efficient means of alerting restaurants to equipment anomalies, the escalation process that ensues is what ensures food loss cost avoidance. Typically, depending on the extent of the refrigeration equipment malfunction, restaurants have little more than four hours to restore appropriate temperature settings before risking food loss.

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While third-party monitoring services vary widely in the service level agreements they offer, there are a few standard—and some often overlooked—services that restaurants should evaluate when considering outsourced monitoring:

- **Time to, and prioritization of, alarms.** Ensuring that management isn't alerted to user error, such as an employee temporarily leaving a freezer door open, avoids unnecessary escalation to a costly service call. A 30- to 60-minute delay before alerting management to anomalies is recommended to allow time for correction. When alarms do require outside attention, a work order management system aids the prioritization of alarms based on severity, thus mitigating the risk of loss.
- **Remote diagnostics and repair, and timely dispatch when necessary.** Service providers that can remediate refrigeration issues without the need to dispatch a service technician can save restaurants significant time and money. Ensure your service provider is adequately staffed, 24/7/365, by highly qualified control center technicians. When refrigeration unit repair necessitates dispatch of a technician, ensure your service provider's service level agreement includes no more than a two-hour window to get the technician on-site.
- **Redundancy and integration.** To avoid disaster on your part, your service provider should be prepared to deal with disaster on theirs. Choose one that demonstrates redundant systems and backup power sources, creating the ability to maintain access to your account in the event of a service interruption at their own facility. It's also important to consider the service company's ability to integrate with your enterprise energy and utility management systems. Forming close relationships with utility providers is a plus, as it enables proactive notice of planned outages.

In the restaurant business, managing massive inventory and labor costs is very much about protection—protecting food assets from disaster and protecting associates' time. For some restaurants, refrigeration performance and alarm monitoring can drive both those outcomes, simultaneously.

George Huettel is Business Solutions Director at Ecova. Huettel's career includes more than 25 years in commercial facility and energy management, with an emphasis on automation and controls.

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