Preserving Fresh and Frozen

Real-time temperature data ensures perishable freshness for LTL company

**Background**

H&M Bay is one of the country’s premier less-than-truckload (LTL) consolidation and freight brokerage companies, shipping hundreds of loads a week. With nearly 40 years in the industry, the Maryland-based company specializes in shipping refrigerated and frozen food among eight operating zones in the United States. They arrange the pickup of perishable palletized products, which are shipped to one of their consolidation hubs. After arriving at the hub, pallets are paired with other products headed toward similar destinations and stored at the same temperature range.

Ensuring proper storage temperatures isn’t as easy as setting a thermostat on the truck and walking away. A variety of factors come into play.

An operator might set the refrigeration unit at a different temperature from what the bill of lading indicates. A typical scenario is that a driver may not realize they are transporting a frozen shipment and instead set the temperature for a fresh load or vice versa.

The setting on a truck’s refrigeration unit isn’t the only factor that influences storage temperatures. Ambient temperatures have a significant impact upon interior storage conditions. The hotter it is outside, the harder a refrigeration unit has to work. And the more energy a refrigeration unit uses, the harder it is to maintain constant storage temperatures over extended periods of time.

“Since it is not uncommon for deliveries to travel across multiple regions with different weather conditions, maintaining storage temperatures within a designated range can be a challenge,” said Ketterman.

**Challenge**

Ensuring proper storage temperatures

Since H&M Bay transports frozen and fresh foods, it must ensure those loads are stored at the correct temperature to guarantee freshness, quality and safety. Frozen loads are stored between -10 and 10 °F, and fresh loads are stored between 28 and 40 °F.

“We’re financially responsible for any shipments that do not arrive within the correct temperature range,” said Joe Ketterman, risk manager for H&M Bay. “Since some shipments can be of high value, there is tremendous financial risk if something goes wrong. To minimize this risk, we needed a reliable way to ensure the cargo remains within the designated temperature ranges.”
Gaining visibility to in-transit deliveries

As a broker, H&M Bay doesn’t own the trucks transporting its shipments and contracts with a nationwide network of independent truckers. This network was unable to provide access to truck satellite data or enable the tracking of in-transit shipments in real time. Because its customers would often contact H&M Bay for shipping updates, the company needed an accurate way to track some shipments.

Confirming and correcting storage temperatures

To acquire real-time insights into refrigeration temperatures, H&M Bay turned to Emerson’s GO real-time trackers. The company uses GO real-time Lux trackers at all its consolidation facilities in the United States. When pallets are consolidated, H&M Bay often uses a tracker for an extra layer of protection. Data from the trackers is integrated into H&M Bay’s application software, so internal stakeholders can access temperature and location information at any time.

GO real-time Lux trackers combine real-time temperature and location reporting technology with a highly sensitive light sensor for cargo security. The tracker enables H&M Bay to track product temperatures throughout shipping, always know where the shipment is, and detect unauthorized access to its perishable cargo.

Integrating cold chain data into an application

While Emerson’s Oversight portal makes it easy for customers to download and view critical shipment data, H&M Bay wanted to use its own application to store and view this information. Using Emerson’s Integration solution, data stored on the Oversight portal is transferred automatically to H&M Bay’s application.

Data collected from the GO real-time trackers automatically syncs with H&M Bay’s existing application, providing real-time critical shipment monitoring information. This allows H&M Bay to track all their shipment information from one dashboard and easily distribute critical data and alerts.

H&M Bay’s application automatically downloads tracker data every 120 minutes and compares these readings with the required temperatures for the shipments. If there is a deviation between what the temperature is supposed to be and what it is, Oversight alerts; available on demand, alerts H&M Bay to correct the temperature setting.

"By comparing this data, we know right away if there is a temperature discrepancy," said John Walker, H&M Bay’s IT director. “Having this data early on lets us alert the driver to correct the temperature setting before it affects the quality of the shipment. And since we can receive this information directly to our application, we can manage everything from our preferred platform without duplicate work.”

Reducing claims and financial liability

H&M Bay has experienced a variety of benefits by using the GO real-time Lux trackers. These include:

- **Reduced spoiled shipments.** H&M Bay can monitor shipments and alert drivers when a storage temperature drops outside the desired range. By responding to temperature anomalies quickly, they have reduced the number of spoiled shipments and the financial liability of customer claims.

- **Responded quickly to mechanical failures.** Should a tracker identify a rapidly rising temperature, it could indicate a malfunction on the refrigeration unit. H&M Bay can contact the driver to alert them of the issue and respond quickly to transfer the shipment to another truck before the freight is compromised.

- **Reduced insurance costs.** H&M Bay has also experienced lower insurance premiums as a result of using the trackers. Not only do the trackers reduce the potential for claims, but they can also lead to faster recovery of a stolen load.
Before implementing the trackers, H&M Bay had experienced situations where a driver would arrive at a loading dock with a frozen shipment that was supposed to be fresh or with a fresh shipment that was supposed to be frozen. Using the trackers, H&M Bay has discovered moments after the truck left the dock that the storage temperature didn’t match the required temperature and contacted the driver immediately to correct the setting. Now, H&M Bay avoids those situations and ensures shipments are stored at the temperature they need to be to guarantee the correct temperature — saving the company thousands of dollars in lost product and claim reimbursements.

“Product quality is important to our customers and us,” said Ketterman. “Having real-time temperature data not only gives us the accurate data we need to respond to customer disputes. But by keeping freight at the right temperature, we can avoid claims in the first place.”