



Air Curtains Help KUNA Foodservice Maintain Cold Chain Logistics



Thermo King air curtains help KUNA Foodservice ensure energy efficient cold chain logistics, reducing up to 45% of energy usage to recover cargo temperature.



THE CHALLENGE

Maintaining the Cold Chain on
Demanding Urban Routes

For more than 100 years, KUNA Foodservice has grown from a small family-owned St. Louis butcher shop into the region's largest independent food service distributor. Today the business serves 15 Midwestern states, and its commitment to quality, attentiveness and customer service remains unchanged from its earliest days.

As the company's delivery network expanded, KUNA's refrigerated truck fleet has become an essential link in maintaining the cold chain. Many of the company's routes run through dense urban areas where drivers may spend

up to 45 minutes unloading per stop, followed by only 15 to 20 minutes of drive time before the next delivery.

The short intervals between stops leave little opportunity for refrigerated trailer temperature recovery, making environmental control inside the trailer one of the most pressing day to day challenges.

KUNA used clear PVC strip curtains for years to maintain temperatures during unloading, but over time they became more of a hindrance than a help. Drivers faced tripping hazards and poor visibility, with some cutting the strips just to load and unload safely. Fleet managers repeatedly replaced the curtains, only to see the same problems return.

Meanwhile, extended door openings during curbside deliveries allowed warm, humid air to enter the trailers, causing defrost issues and, at times, partially thawed product that required replacement. As Jim Patterson, plant engineer/fleet manager for KUNA Foodservice explained, "In the food service world, the cold chain is everything, but the strip curtains were working against us."

KUNA needed a safer, more reliable and more efficient method for maintaining temperature stability during the long unload times and tight delivery intervals that define its daily operations.



→ THE SOLUTION

Air Curtains Deliver Safer, Simpler Temperature Control

Through its long-standing relationship with Thermo King dealer CSTK, KUNA learned about BlueSeal air curtain technology designed specifically for temperature protection during open door deliveries. After discussing the unique demands of KUNA's routes, CSTK arranged a full-scale trial of the solution.

The impact was immediate.

"KUNA tried this solution for three months and their pain points were solved," said Julianna McGrane, aftermarket sales manager for Thermo King. Drivers could move freely without obstruction, and Patterson began noticing the difference in temperature stability from the first weeks of testing.

"The curtains maintain temperatures better," Patterson said. "And we weren't getting complaint calls about defrost or humidity issues."

Compared to trailers without air curtains, Patterson reports that units equipped with Thermo King's solution experienced smaller temperature spikes in both the freezer and cooler compartments. They also returned to their setpoint temperatures significantly faster.



BlueSeal air curtains had already earned high satisfaction ratings from drivers in Europe where independent testing of these curtains demonstrated a substantial energy savings: cutting up to **30 percent of energy use** in a small box truck and reducing up to **45 percent of energy use to recover cargo temperature** in an 18-ton refrigerated truck model.

As KUNA observed similar performance improvements in real-world use, confidence in the solution grew quickly.

→ THE RESULTS

Faster Temperature Recovery, Lower Costs, Stronger Cold Chain

Once the air curtain was installed, temperature recovery improved, defrost issues diminished, and humidity-related problems virtually disappeared.

"In the food service business, maintaining the cold chain is everything when it comes to food safety," Patterson emphasized. "Here in the Midwest, managing humidity alone is its own challenge."

With the air curtain installed, he noticed immediate improvements.

"The air curtain maintains the cold chain while overcoming humidity challenges," he said. "Thermo King air curtains prevent humidity from getting in there at all."

Reliability saw a notable lift as well.

"I haven't had any service calls from the driver whose truck had the air curtain installed on it," Patterson added.

With strong performance, positive driver feedback and fewer service concerns, KUNA is moving forward with plans for wider adoption among its fleet.

"We plan to install curtains on our late model fleet units," Patterson said. "Drivers like the air curtains; they help reach the right temperature, and they maintain it."

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