



A REAL-WORLD

A2L

CONVERSION

HOW AN ARIZONA SCHOOL BECAME GROUND ZERO FOR THE FUTURE OF REFRIGERATION

Before sunrise on July 1, 2025, the crew from Arrowhead Superior Refrigeration rolled their trucks into the parking lot of Glendale American Elementary. It was already edging past 90°F, and the air was thick with the promise of a Phoenix summer scorcher. The mission: replace a failing 19-year-old walk-in freezer with Heatcraft Refrigeration Products' newest innovation — and then, one week later, put that system to the test by converting it from an A1 refrigerant to a next-generation A2L.

The crew wasn't just installing equipment. They were installing confidence — in new technology, in the future of commercial refrigeration and in the people who would make that future real.

PROJECT SNAPSHOT



LOCATION

Glendale American Elementary
School, Glendale, Ariz.



APPLICATION

Walk-in freezer (school kitchen)



INSTALLER

Arrowhead Superior Refrigeration



DISTRIBUTOR

American Refrigeration Supplies
(ARS)



INSTALL DATE

July 1, 2025



CONVERSION DATE

July 8, 2025



EQUIPMENT

3.5 HP Heatcraft dual-refrigerant
condensing unit, 3-fan Larkin unit
cooler with intelliGen



INITIAL REFRIGERANT

R-448A (A1)



POST-CONVERSION REFRIGERANT

R-454A (A2L)

THE PERFECT STORM

(and the Perfect Test)

Glendale American Elementary School's freezer system had served its time. Nearly two decades old, the Bohn system was limping along — and the school wasn't about to gamble on food safety.

For Manny Griego Sr., founder of Arrowhead Superior Refrigeration, this was more than just another job. It was a chance to prove something. "We'd just toured the Heatcraft plant in Tifton," he said. "When they showed us the new dual-refrigerant gear, I knew we had the right job coming up. This was it."

The install site was brutal — a walk-in freezer with three exterior walls and a roof exposed directly to the Arizona sun. By noon, surface temperatures could hit 120°F. The box itself was inside the kitchen, but the roof-mounted condensing unit would have to survive a desert blast furnace.

"Honestly," Manny laughed, "this is the worst-case scenario. And that's why it's perfect."





A photograph of a man, Kenny Herrera, wearing a blue baseball cap, glasses, and a blue polo shirt. He is smiling and working on a metal roof structure. The image is overlaid with a solid blue color. The text 'FIRST THE INSTALL, THEN THE HEAT' is written in large, white, sans-serif capital letters on the left side of the image. On the right side, there is a quote in white text with large blue quotation marks, and the name 'Kenny Herrera' at the bottom right.

FIRST THE INSTALL, THEN THE HEAT

**It's
technician-
friendly.
They set
us up for
success.**

– Kenny Herrera

The Arrowhead team — Manny Sr., his son Manny Jr., veteran tech Kenny Herrera, and a helper — hit the ground running before sunrise. “We had to beat the heat,” Manny Jr. explained. “Once the roof gets hot, it’s like working on a stove.”

They began by recovering the refrigerant from the old system, taking down the evaporator and removing the rooftop condensing unit. Then came the upgrade — Heatcraft’s new dual-refrigerant class system designed to run on either A1 or A2L refrigerants. The system was charged with R-448A to establish a performance baseline, and the team ran a full hot-box startup.

By 3:30 p.m., in 115°F heat, the system was online. Within hours, the walk-in hit temperature — and held it. Through record-breaking heat and full-sun exposure, the system didn’t flinch.

ONE WEEK LATER, THE REAL TEST BEGINS

On July 8, the Arrowhead team was back on site. But this wasn’t a service call — it was the next phase of the trial: converting the newly installed Heatcraft system from R-448A (an A1 refrigerant) to R-454A (an A2L refrigerant). The goal? Prove that this dual-refrigerant class system could be safely and efficiently adapted in the field, without the need to replace the entire system.

“This is what makes the system revolutionary,” Manny Sr. said. “Most of the time, when refrigerant regulations change, you’re forced to rip everything out and start over. Let’s say a contractor installs a new A1-only unit cooler to replace a failed one, but the old condensing unit still works. A year later, that condensing unit finally fails. Now, to be compliant with EPA regulations, you can’t just replace the condensing unit — you’d also have to rip out that ‘new’ A1 unit cooler you just installed. That’s wasted time and money.”

He continued, “With Heatcraft’s dual-refrigerant system, that same contractor can install a convertible unit cooler today using the existing A1 refrigerant. Later, when the condensing unit goes down and it’s time to switch to A2L, they don’t have to touch the unit cooler — just convert it in

the field. No waste, no double work and the system is future-ready from day one. That’s the difference. That’s why this is a game changer.”

The conversion process was handled by Manny Jr. and Kenny. First, they shut down the system and safely recovered the R-448A. Then the real work began.

Inside the walk-in, Manny Jr. installed the Refrigerant Detection System (RDS) — a key safety feature required for A2L refrigerants. The RDS includes a sensor board, relay and alarm mechanism that ensures the unit automatically mitigates any detected leak by isolating refrigerant flow and triggering the appropriate shutoffs. Outside, Kenny mounted the safety shutoff valve (SSOV) and a check valve on the liquid and suction lines, respectively, providing additional safeguards in accordance with UL 60335-2-89.

“What really stood out was how intuitive it was,” Kenny said. “Everything was pre-engineered to fit. No custom wiring. No guessing. Just follow the steps.”

Once both techs completed their installations, they recharged the system with R-454A, affixed new A2L refrigerant labels and updated the IntelliGen controller — which already included R-454A in the latest firmware version. The RDS was automatically detected, the system ran a diagnostic check and the box was back up and running.

All told, the conversion took just over an hour.

“I followed the video and the written instructions,” Manny Jr. said. “It was super simple. Everything was laid out clearly. We took our time this first go around — but next time? I bet we can do it in 40 minutes, easy.”

For a system conversion to a mildly flammable refrigerant, the ease and speed were unprecedented.

But perhaps most importantly, the safety protocols — both built into the equipment and followed by the crew — were thorough and confidence-inspiring.

“This isn’t a shortcut,” said Manny Sr. “It’s a smart way to move forward — safely, responsibly and without starting over.”

WHY THIS MATTERS

Quick turnaround: From start to restart in about an hour

No new system needed: Just convert with RDS kit and firmware update

Safe to Install: Designed with the contractor’s safety in mind

Cost-effective: Less labor, less downtime, no full replacement

DISTRIBUTOR BUY-IN AND INDUSTRY IMPACT

For American Refrigeration Supplies (ARS), this project wasn't just an opportunity to showcase a new product — it was a blueprint for navigating the coming refrigerant transition with confidence.

"This was never just about installing a system," said Larry Allen, ARS's refrigeration product support manager. "It was about proving a concept. We've talked to so many contractors who are nervous about A2Ls — mostly because of safety concerns, but also because they're afraid of getting stuck. If one part of a system fails and you're not using dual-compatible equipment, you might have to tear out the whole thing just to comply with new regulations. That's what keeps them up at night."

The dual-refrigerant class platform changes that equation entirely. It allows contractors to install one piece now, another piece later — both compatible with either A1 or A2L refrigerants — and convert only when the time is right. That kind of flexibility simplifies decision-making and lowers the risk for everyone involved.

"This solves all of that," Allen said. "It takes the fear out of the future."

But it isn't just the contractors who benefit. For ARS and other distributors, the system helps streamline inventory

management. Instead of juggling separate product lines for A1 and A2L systems, ARS can now stock one versatile solution that's compatible with both — reducing complexity, warehouse space, and capital tied up in parts.

That support aspect is a point of pride for ARS. Because they were part of the install from the start — side-by-side with Arrowhead and Heatcraft — their technical team got hands-on experience they can now bring back to their contractor network.

"We're not just sitting behind a counter selling boxes," said Rob Edens, director of operational audit for ARS. "We're out here in the field learning with our partners. That gives us credibility when we say: This works. This is safe. This is the future. And we can help you get there."

ARS has invested heavily in contractor education — hosting training sessions, offering hands-on demos and even walking technicians through conversions step by step. They see this moment not just as a regulatory challenge, but as a chance to lead.

"We've got a window right now to get people comfortable with A2Ls," Edens said. "This project shows it's not just possible — it's practical. And when you combine safe equipment, smart training and the right partners, you're setting the whole industry up to succeed."

WHY HEATCRAFT'S DUAL-CLASS SYSTEM IS A GAME CHANGER

- Two refrigerant classes, one system
- Safer than separate systems — built for what the industry already knows
- Meets EPA requirements now and into the future
- Limits downtime, disruption and labor cost
- Simplifies distributor inventory
- Sets contractors up for regulatory compliance

**Fewer SKUs.
Less risk. Better
support. It's a win
at every level.**

– Rob Edens, Director of Operational Audit, ARS



LOOKING FORWARD, MEASURING PERFORMANCE

Now that the system is running on R-454A, Heatcraft and Arrowhead will continue collecting performance data — looking at efficiency, recovery times and how the system handles real-world use.

"We want to see how it bounces back after defrost, or when the kitchen staff loads in product," Manny Sr. said. "That recovery time tells us everything about how the refrigerant performs."

Early results are promising. No system alarms. No call-backs. Just consistent temperature and reliable operation.

And most importantly? Confidence — in the gear, in the process and in what's ahead.

FINAL WORD: THIS IS THE FUTURE

For Arrowhead, being the first wasn't just a badge of honor. It was a business decision. The dual-class system lets them install compliant equipment now and convert later — without starting over. For school districts and restaurants on tight budgets, that flexibility is a game-changer.

"For us, it's about doing right by our customers," Manny Sr. said. "We can save them money, reduce their downtime and still prepare them for the future. That's a win every time."

For ARS, it's about leadership. For Heatcraft, it's about making the transition as simple and safe as possible.

For the rest of the industry? It's a road map.

