

COMPANY PROFILE ///

ACROSS INTERNATIONAL

*FULLY COMMITTED
TO PROVIDING
**RELIABILITY,
INNOVATION,
AND VALUE***

Across International 50L
jacketed glass reactor
with thermal insulation
jacket. (Courtesy: Across
International)

Across International is an industry leader in the manufacture of heat-treatment, vacuum, and material-processing equipment with a simple mission: to empower those advancing science by offering innovative and high-quality products, along with the best customer support.

By **KENNETH CARTER**, Thermal Processing editor

Across International is the product of two immigrants who dreamed big when they started shipping equipment out of a garage in New Jersey more than two decades ago.

Those humble beginnings paved the way for what has become a thriving company with locations around the world serving the heat-treating needs of multiple industries.

"We've earned the business of many respectable government agencies, universities, and Fortune 500 companies," said Anna Tykowski, senior public relations with Across International. "Some of our best customers include U.S. and Canadian labs and divisions of energy and military, industry leaders such as Byron Products and TSC EcoSolutions, and leading universities such as Georgia Tech, University of Delaware, Western Kentucky University, and many more. We work hand-in-hand with some of the brightest scientists and researchers from around the world."

The wide spectrum of customers that Across serves shows how the company can deliver quality workmanship no matter the customers' budgets, according to Tykowski.

"This is so that a start-up from a university or research lab can continue to choose our brand for a wide variety of products and sizes that will accommodate their growth and success," she said.

WIDE RANGE OF PRODUCTS

For the heat-treating industry, Across offers a wide range of furnaces that covers a spectrum of functions, according to Tykowski.

"We have a lot of different types of furnaces," she said. "We have muffle furnaces, which are good for enamel coatings, annealing, tempering, or brazing. Then we also have controlled atmosphere furnaces, and those are great for people who want to use an inert gas inside the chamber to create a controlled environment. Tube furnaces are good for small samples undergoing synthesis, purification, chemical-vapor transport, or similar processes. We carry multi-zone and single-zone tube furnaces with various tube diameters. Samples are loaded into a quartz or ceramic boat and pass through the length of the tube using a push rod. Tube furnaces are particularly useful within the semiconductor industry."

But the big draw for heat-treating is Across International's induction heaters, which heat metal by applying an electric current, according to Tykowski.

"It works with both ferrous and non-ferrous metals," she said. "Usually, people use it for preheating for welding, or they'll melt batches of precious metals. We had a dentist use an induction heater to recover the metal from old tooth fillings, for example."

In addition to Across International's induction furnace line, Tykowski also said the company offers custom coils.

"We are happy to assist our customers in designing customized



Across International AccuTemp-series 16 cubic foot multi-zone vacuum drying oven. Features 6 dedicated temperature controllers with built-in shelf heating technology. (Courtesy: Across International)

induction coils for targeted heating of magnetic materials at rates of up to 100°C per second, depending on samples, which enables continuous production lines and huge energy savings in the heat-treatment processes," she said. "If you have an oddly shaped part, and you're not sure what's the best way to bring it up to temperature, we can help figure out a solution. In these situations, we'll request a sample of the part being heated, as well as the desired results, and we'll do our own in-house testing to make a suitable recommendation for both the coil structure and the right induction heater for the job."

By working thoroughly with its customers, the experts at Across have discovered innovative ways to offer its services, according to Tykowski.

"In the lower-temperature chemistry R&D and production labs alike, we've found that many of our customers are continuously feeding our SolventVap rotary evaporators with a food-grade PTFE valve and evaporating volatiles for separation at impressive speeds," she said. "To accommodate their continuous throughput demands, we have expanded to offer dual main condensers (for a total of three) to maxi-



Quality control inspections being performed on a compact recirculating heater at Across International's headquarters in Livingston, New Jersey. (Courtesy: Across International)

mize surface area for re-condensation, and dual receiving flasks so that one can be drained while the other continuously receives condensate.”

SAMPLE TESTING

Sample testing is a unique service Across can offer its customers, according to Tykowski.

“Sample testing is a fantastic service we provide,” she said. “We have a lot of folks who try to melt very tricky things, like powders, platinum, or titanium. We encourage sample testing in those situations, to make sure everything works according to expectations. What it comes down to is providing custom solutions.”

Custom solutions are an integral part of Across International's methodology when a customer approaches the company with a challenge.

“We start from scratch to create these unique solutions,” Tykowski said. “If they come to us with a complicated part due to shape, size, material, or anything along those lines, we can offer sample testing to ensure our clients' success without their incurring the cost of buying a unit and conducting their own research. If they require a nondisclosure agreement, we always do our best to safeguard our customers' privacy. If we need to create an equipment customization, we can do that, too. There have been times where a customer has needed an access port for a forced air oven to insert a sensor or probe, and we were able to customize it to their specifications.”

Although customizations are not always needed for Across customers, the company is ready and willing to do them, according to Tykowski.

“Our experienced engineering team is well-equipped to make custom modifications,” she said. “They are wildly talented at what they do, and they love solving the challenges that come with these customizations.”



Across International customizable 1,200°C PECVD tube furnace. (Courtesy: Across International)

CUSTOMER PERFORMANCE

One of Across International's main goals is to improve customer performance in the field, while minimizing heating times lost to inefficiency, according to Tykowski. Across refers to this as “targeted heating.”

“That often means approaching heat treatment from a different angle,” she said. “Targeted heating is one of these methods in the

individually heated and controlled racks in our AccuTemp multi-zone vacuum ovens. That's only one example. Each rack and the samples have their own individual dedicated temperature controller, and they get the same atmospheric conditions. If you have a sample that you want at 78°F, you can put it on one shelf, and if you want one at 80°F, you can put it on a different shelf. Features like this are useful if you're doing a controlled experiment with different temperature variables. We also work on decreasing time-to-temperature by having the heat applied directly underneath the sample."

Essentially, different levels of the oven can be adjusted to different temperatures, according to Tykowski, making the oven extremely versatile.

LARGE GROWTH IN A SHORT TIME

Across International is a private American company that has grown by leaps and bounds since its beginning in 1998.

In 2008, the company established its first office in Berkeley Heights, its first official headquarters in New Jersey, which is also when the company's main website was launched.

Later, in 2012, the headquarters moved to Livingston, New Jersey, according to Tykowski. In 2015, the company identified a growing need to serve its customers on the West Coast, so Across established another location in Sparks, Nevada. That same year, Across opened another location in Victoria, Australia, which serves Australia, New Zealand, and the neighboring Asian countries.

"And that's where we are today," she said. "And there are plans in the works to continue growing."

And growing it is: Across International is in the process of increasing the square footage of its facilities in Victoria, Australia and in Reno, Nevada, according to Tykowski.

"All of this is being done to help support the expansion we need to meet and exceed our customers' demands," she said.

Across has its eyes on creating solutions for larger scale production capacity and increasing the robustness of its equipment for accommodating bulk manufacturing, according to Tykowski.

"We're also working hard to build partnerships and distribution networks in new markets across the world to help bring our high-quality products to new scientists and innovators that can put them to work growing their business and innovating for their community and our modern globalized trade network," she said.

'TOP-NOTCH' CUSTOMER SERVICE

One of Across' crown jewels is the company's stellar customer service.

Tykowski stressed that Across International's customers can greatly benefit from having a team of support engineers available for long hours, whether it be by phone, email, video chat, or in person in the field. Across provides U.S.-based technical support services not only for the duration of the manufacturing warranty period, but also for the lifetime of the equipment.

"I think our customer service is just top-notch. It really is. We want to make sure our customers have the resources they need to resolve any problems," she said. "And we have a great return policy. Our tech support is lightning fast at getting back to inquiries. We're all based in the U.S. You don't have to go overseas to get help. All our parts, service, and support are here. We also can coordinate on-site repairs, if necessary. We really do our best to take care of our customers, and they mean a lot to us. We wouldn't be here without them." 🌟



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