

COMPANY PROFILE ///

OHIO CARBON BLANK INC.

GRAPHITE SOLUTIONS FOR INDUSTRIAL APPLICATIONS

Ohio Carbon Blank makes a variety of products used for sintering and brazing. (Courtesy: Ohio Carbon Blank)

Ohio Carbon Blank Inc. offers graphite products and CNC machining for the EDM and mold-making industries, including heat treating, glass industry, and many others.

By **KENNETH CARTER**, Thermal Processing editor

When parts need to be brazed, sintered, or heat treated, they often need a suitable substrate, holder, or fixturing to hold them in place as they are exposed to the high temperatures frequently associated with vacuum-furnace applications. But who supplies these high-temperature materials, and who makes these niche products?

Ohio Carbon Blank is one of the major players. It has been making custom graphite plates for brazing and sintering applications, as well as custom fixturing for welding and heating-treating applications for more than 10 years. In addition to specialty plates, trays, and fixturing, Ohio Carbon Blank also manufactures heating elements and various other internal components for these vacuum furnaces.

Ohio Carbon Blank has been providing graphite materials and specialty graphite machining services for more than 40 years. From the '80s to the early 2000s, Ohio Carbon Blank was a leader in the electrical discharge machining industry, providing precision ground blanks and finished electrodes for those needing to machine intricate details into exceptionally hard, difficult-to-machine materials.

Over the years, however, the company has evolved, expanding materials and investing in new machinery and advanced inspection capabilities. A number of high-speed, precision CNC machines give Ohio Carbon Blank expanded capabilities, as well as improved efficiencies to tackle nearly any sized job. When it comes to graphite machining, OCB has many years of experience grinding, milling, turning, drilling, and tapping graphite. As a result, the company is often referred to as the graphite machining experts.

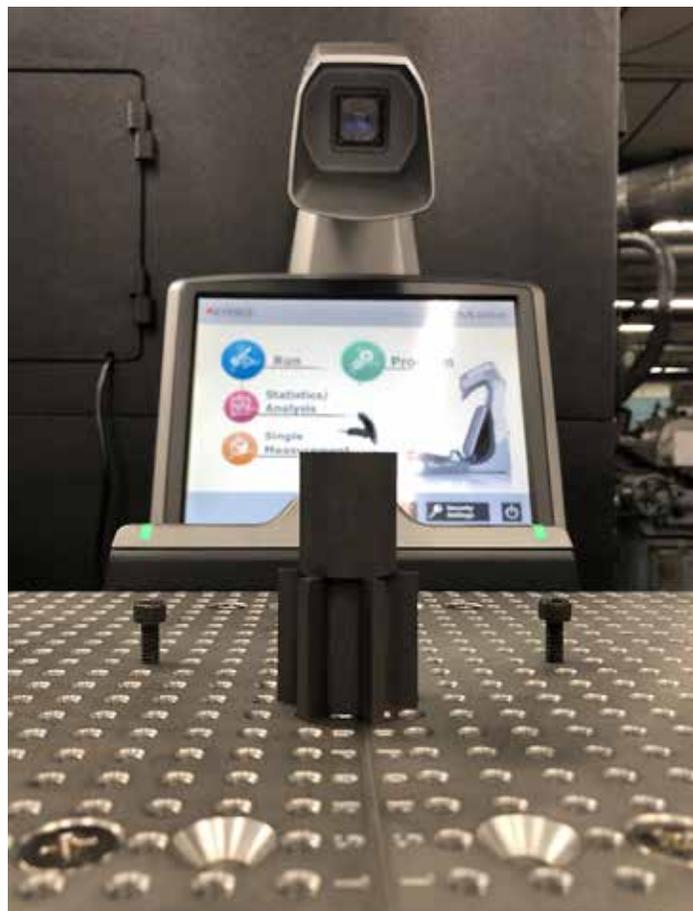
“Due to increasing demand from the vacuum furnace industry, we have been producing more and more custom plates, trays, and fixtures for these particular vacuum-furnace applications; products machined-to-print that furnace operators can safely put into their furnaces and not risk damage or deformity,” said Paul Geoffrion, sales manager at Ohio Carbon Blank Inc. “That includes heat treating, brazing, welding, and sintering, too. We have clients that use graphite for the sintering trays because it simply lasts longer than the ceramic counterparts. At the end of the day, graphite tends to be more economical and cost efficient.”

‘QUICK TURNAROUND’

“Our goal is to be the primary supplier for CNC machining of items for thermal management and many other industries,” he said. “That means we offer rapid turnaround of machined-to-print products at competitive prices. Our current lead times are seven to 12 days, as opposed to many other suppliers that are six to eight weeks.”

That quick turnaround is a guiding principle with Ohio Carbon Blank, and Geoffrion emphasized it’s one the entire company takes seriously. Ohio Carbon Blank has gone to great lengths to grow and be competitive.

“We have multiple CNC machines to manufacture orders to our customers’ requirements,” he said. “We have the inspection equipment and expertise to ensure customer requirements are satisfied.



Ohio Carbon Blank recently added a new Keyence inspection machine that can help speed up the inspection process. (Courtesy: Ohio Carbon Blank)

“Our philosophy is to give our customers good quality made-to-print products that are shipped within the quoted lead time. We maintain a 95 percent or greater ‘on-time shipping’ standard that is part of our ISO 9001:2015 requirement. We can work with any freight company to ship our customers’ orders. We’ve been ISO certified for over 20 years, which has helped us streamline and make our processes more efficient. We’re always striving for continuous improvement as well.”

According to Geoffrion, getting a job completed quickly is essential, but equally important is Ohio Carbon Blank’s ability to get a quote out as fast as possible.

“Our capabilities for quoting custom jobs include a very knowledgeable engineering department and an experienced CNC department,” he said. “We can typically turn quotes around in a day or two, depending on complexity and number of drawings. We try to get things done quickly and efficiently for our customers. We know that time is money.”

Making sure a customer has what they need when they need it is



Ohio Carbon Blank has 40 years of graphite machining experience. (Courtesy: Ohio Carbon Blank)

crucial, according to Geoffrion; communication with the customer is key.

“They’ll give us drawings of a fixture or an item they may want, and we work with them to ensure that the print reflects exactly what they need, including any specified tolerances, etching, or any special handling requirements,” he said. “If they have a challenging application, we can recommend materials that may be better suited than what they might be currently using.”

EXPERT ADVICE

That’s an important feature to have when a customer calls for a quote. Geoffrion and his team can often suggest a more straightforward or economical solution.

“A customer will send a print that has squared pockets, and we’ve gone back to the customer and said, ‘If we use a rounded end mill here and have a radius at the bottom, that would save machining time, and in turn, save you money. Would that be acceptable for you?’” he said. “That’s opposed to us having to order a custom tool or maybe spend extra time. It might be more cost-effective to use a tool we already have on hand. We have done things like that in the past, especially when customers may not know the design process.”

Ohio Carbon Blank has a variety of materials to meet just about any heat-treating application need, according to Geoffrion.

“And if our customer needs a specialty grade of graphite material, we can usually acquire it,” he said. “We’ve evolved as industry and applications have evolved. We are expanding our CNC department with new equipment for more diversity.”

EFFICIENT PART INSPECTION

According to Brian Strollo, sales and marketing engineer, the company recently added a new Keyence inspection machine that can help speed up the inspection process.

“That machine is very effective and has 3D-video capability, so



“We’re into an array of fields now. Graphite is very unique and versatile. It’s a fascinating material.”

basically, it can look at a part and identify whether the part is within tolerance immediately,” he said.

Geoffrion also praised the inspection machine and its capabilities.

“This newly acquired machine provides accurate readings for our inspection data sheets and is a great compliment to our existing line of inspection devices,” he said.

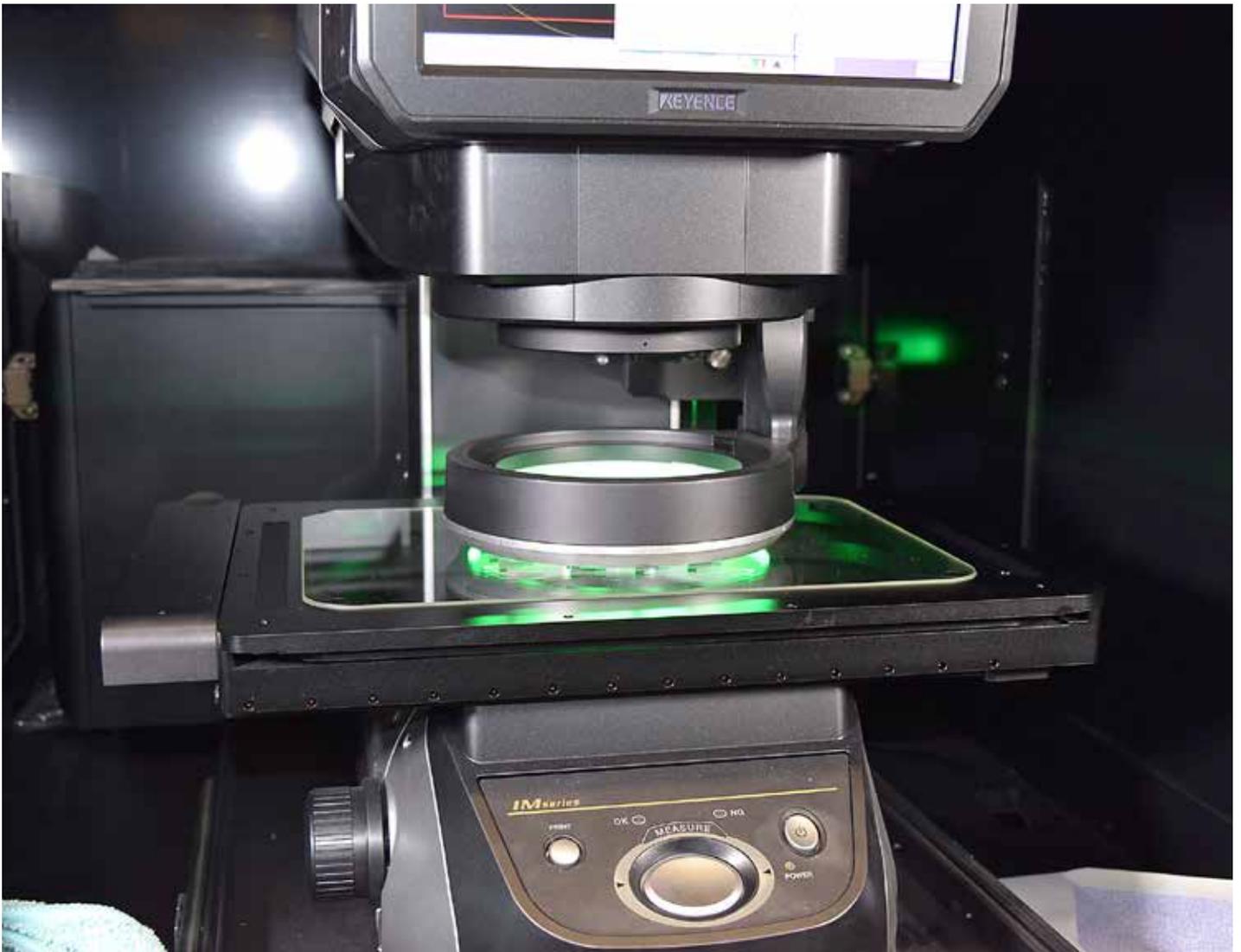
GRAPHITE: A MULTI-FACETED MATERIAL

Although graphite is a valuable material for heat treating, it is also used in many other applications as well. Strollo said the company is involved in many fascinating new applications, well beyond the conventional uses; i.e. electrical discharge machining, mold making, die castings, and typical thermal management applications.

“We’re into an array of fields now,” he said. “We have companies that use our graphite materials for human tissue growth; some use graphite as a substrate material to grow diamonds, and now we are using graphite in modern batteries, sensors, and various electronics, too. Graphite is very unique and versatile. It’s a fascinating material.”

ONLINE QUOTES AND ORDERING

Many of Ohio Carbon Blank’s customer needs involve standard size rounds, rectangles, hexes, etc., according to Geoffrion, and making sure customers can get parts and get them quickly falls on Ohio



Ohio Carbon Blank has advanced inspection capabilities. (Courtesy: Ohio Carbon Blank)

Carbon Blank’s unique online quoting and ordering system for these types of standard items.

“Customers can log in, get quotes for materials and order them online immediately – immediate pricing, immediate order placing,” he said. “Now, that does not support custom machine-to-print items; it’s used just for general shapes such as rectangular, rounds, squares, or hexagonal items. Our Graphimator® is a patented piece of software, and we are the only company among our competitors to have that.”

Geoffrion said Strollo was instrumental in the development of this unique ordering system. His expertise has allowed the company to continue improving and maintaining the functionality of the Graphimator®.

“It allows orders to be placed with a variety of surface finishes and tolerances,” he said.

And Geoffrion said the company will be launching a new website soon.

“It will have a smoother interface and allow customers to upload drawings or send RFQs right through the website,” he said. “Another unique feature that Ohio Carbon Blank and the Graphimator® offers is a ‘bulk upload’ in CSV format for orders with a high number of line items.”

40-PLUS-YEAR HISTORY

Ohio Carbon Blank opened its doors in 1979 after owner Scott Boncha

saw the need first hand, according to Geoffrion. Boncha had been working in a machine shop that ran electrical discharge machines where they were hand grinding and making all of their own electrode blanks for the EDM process.

“It’s time-consuming and messy, so he got the idea of opening a machine shop where he could manufacture those EDM blanks,” Geoffrion said. “It was a niche business, and that had been the bulk of our work. But in the last 10 or so years, we’ve branched into non-EDM applications and industries for the vacuum-furnace industry, among others. We supply to anybody who has a need for graphite.”

Additionally, Strollo stressed a point of pride that Ohio Carbon Blank has been able to continue to supply customers despite the challenges many have faced.

“We have not only endured, but in some cases, we have even grown,” he said.

Strollo also pointed out that the company seeks to become more involved in other areas such as the steel industry, aerospace, and defense as Ohio Carbon Blank moves into the next decade.

“There is always a high demand for strengthened materials and heat treating,” he said. ♣



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