

# RESHAPING & TRANSFORMING THE FUTURE WITH PLASTICS

by Chris Carrigan, Vermont Chamber of Commerce

**B**ased in historical East Arlington, Vermont, K&E Plastics (K&E) is reshaping and transforming the future by crafting and unleashing the power of plastic and non-metallic materials for the aerospace, medical, automotive, utility and defense industries. K&E is one of a handful of companies in the country that does it well and is recognized as an industry leader. With Eric Broderson at the helm, K&E has wisely reinvested profits back into the business and is now poised to target new and emerging markets and opportunities.

What sets K&E Plastics apart is its specialty focus on the machining, milling, drilling, routing, sawing, bending and forming of plastics and non-metallic materials. The company excels at working with two types of plastics, including:

- **Thermoplastics**, synthetic materials, which can be heated and shaped; and
- **Thermoset Plastics**, synthetic materials that cannot be reheated or reshaped after the initial heat-forming stage, after which they must be machined.

According to Broderson, "a world without these plastics would be a world without the many things we take for granted. We are surrounded by a cornucopia of products and components made from plastics. From computers, printers, and cell phones to refrigerators, clothing, automotive components, and electronic devices, we all live and rely on plastics in our daily lives."

K&E was founded in 1965. Broderson's father chose Vermont because the family loved the Green Mountain State and vacationed in Bromley Village. Eric's brother Kurt was also accepted to attend Middlebury College. Broderson's father named the business after his sons and used the first letters of their first names for the company name, K&E. As Vice President and General Manager, Broderson today leads K&E. He values the quality of life for his family, as well as the educated workforce Vermont has to offer. Financially strong and fam-

ily owned, K&E employs 21 people, with annual sales in the millions of dollars.

K&E's customers include Ametek Aerospace, United Technologies Corporation, Dynapower Corporation, General Dynamics, GE, Goodrich Aerospace, Kaman Composite Structures, Mack Molding, and Osram Sylvania. These industry leaders do business with K&E for many reasons, including a compelling value proposition:

- **Compliance**, including ISO 9001:2008 registration that covers the Quality Management Systems for the custom machining of thermoset plastics and thermoplastics on a contract basis, and extensive work with the Vermont Manufacturing Extension Center (VMEC) on: 1) Lean Manufacturing; 2) Value Stream Mapping, and 3) the 5S Workplace Organization and Standardization System: Sort, Set in order, Shine, Standardize, Sustain;
- **Leading edge, high performance products**. When compared to metal(s), plastics offer lighter weight ratios, transparency, acid and chemical resistance, extensibility to combine with other materials for greater strength and heat resistance, and dielectric strength, which insulates electrical current for safety and integrity. Some plastics, furthermore, are approved by the Federal Drug Administration (FDA) and used in X-ray machines for transportation and medical purposes;
- **Internal and robust facilities and equipment**, offering state-of-the-art equipment, including advanced Computer Numerical Control (CNC) machines (Gabbiani Galaxy 125 PLM Panel Saw, Haas CNC Vertical machines and Routers). K&E's vertical machining capacity is 40" x 64" x 30" and router machining capacity is

60" x 120" x 25".

- **Exceptional craftsmanship and capabilities**, including skilled machinists adept at machining all thermoplastics, including engineering grades Ultem®, Torlon® and Vespel®, industrial phenolic laminates and GPO-3 thermoset composites, as well as fiberglass-reinforced polyesters; and
- **Strong commitment and highest attention to detail and quality**,

his work with the Vermont Chamber's Aerospace and Aviation Association (VAAA), Broderson understands that such an endeavor takes time and persistence in developing trusted relationships. He is making the long-term commitment and investment in doing so. By doing all of this, he hopes to one day hand the business over to one of his sons.

"What K&E Plastics does is an art form that adapts the incredibly diverse properties of plastics to empower our daily lives in infinitely evolving ways. Through proven craftsmanship, Broderson and his team at K&E are reshaping plastics and transforming industries, such as aerospace and aviation, for enhanced quality, greater cost

efficiencies and a better, more competitive future," said Chair of the Vermont Chamber's Aerospace and Aviation Association (VAAA) Brian Dubie.

The Vermont Chamber's Aerospace and Aviation Association (VAAA) will hold its next two VAAA Events in the Summer and Fall of 2012. These high-profile events will feature "Supply Chain Opportunities in Naval, Marine and Aerospace, and "Supply Chain Opportunities in Composites for Aerospace, Defense and Medical," respectively.

VAAA is a division of the Vermont Chamber of Commerce and is committed to promoting growth and job creation in Vermont's aerospace, aviation and related manufacturing sectors with:

- A Network of over 250 Manufacturers and Supply Chain Partners;
- Quarterly VAAA Events for match-making, procurement and supply chain opportunities;
- News Alerts, Communications and Webinars to keep you informed; and
- Legislative Advocacy.

For more information on VAAA, contact Chris Carrigan, [carrigan@vtchamber.com](mailto:carrigan@vtchamber.com).

For more information on K&E Plastics, contact Eric Broderson, [eric@keplastics.com](mailto:eric@keplastics.com).



Haas VF3-SS Vertical Milling Machine: 14 Vertical Milling Machines with a maximum working envelope of 40" x 64" x 30."



Haas SL-20 CNC Lathe: 5 Lathes provide versatility from small parts to live tooling.



Haas GR510 CNC Router: 3 Routers equipped with custom vacuum tables to aid in quick set-ups.



For a complete directory of Vermont Chamber of Commerce members who support the Vermont Chamber's Aerospace and Aviation Association, visit our website at:

<http://www.vtchamber.com/business/vaaa/>

[www.vtchamber.com](http://www.vtchamber.com)

