

# The Quarterly Profile

SUMMER  
2016

## 3 Toughest LED Lighting Design Challenges Solved Using Aluminum Extrusions

The use of LED (light-emitting diode) lighting is growing rapidly thanks to its many benefits: higher-quality light, greater energy efficiency, and lower maintenance costs. Yet for all the energy and maintenance saving advantages, conversion to LEDs poses three sizable challenges for both design engineers and fixture manufacturers.

Download our latest paper, [3 Toughest LED Lighting Design Challenges Solved Using Aluminum Extrusions](#), for details on solving these challenges.



## Phase Two of Vitex Press Automation and Capacity Increase Project to Begin July 2016

In December 2015, we installed two key enhancements to our extrusion production capabilities—a high intensity quench system and automated profile stacking system, both manufactured by our partner Presezzi Extrusion. The high intensity quench system has furthered our ability for tighter control of extrusion mechanical properties while at the same time increasing throughput. The automated profile stacking system has mitigated profile handling damage and increased our production throughput.

In the coming months, we will begin installation of two additional capacity expansion projects. In July, we begin installation of a new Belco dual end flow extrusion aging oven, with a capacity to age harden approximately 100,000 lbs. of profiles per day. The new oven is expected to be operational by mid-August and will complement our first Belco dual end flow age oven installed in March 2013.

In October, we will replace our current manual packing lines with two automated pack line sys-

tems from Profile Automation (PA), a division of Presezzi Extrusion. PA is a world leading designer and manufacturer of automated packaging systems for extruded profiles.

In addition to providing a highly ergonomic and efficient system that will significantly minimize cycle times and labor costs, the new pack lines will offer our customers:

- Multiple pack configuration, such as bare banded, paper layer, plastic and corrugated wrapped.
- More uniform bundle formation for stacking, shipping, unloading and customer storage.
- In cases where plastic wrap is used, sheets will conform to the bundles in a tightly controlled manner, reducing the potential for in-transit damage.
- A two-fold increase in throughput, mitigating issues associated with short-term demand pressures.

[vitexextrusions.com](http://vitexextrusions.com)

**VITEX**  
EXTRUSION

# Vitex Expands Fabrication Capabilities for Long Length Parts

The challenge every manufacturer faces is never about equipment alone; it's about seizing new opportunities. Expanding productivity and capabilities, realizing the value we can offer our customers for single-source solutions, and providing reliability and support to help our customers succeed. In March, we complimented our current long bed CNC machining capabilities with the addition of a new KOMO XL Fusion 4 Axis CNC center.

With this advanced CNC technology, we can further support our customers' needs with:

- **Machining Complex Parts:** 4 axis machining allows us to create toolpaths across complex shapes.
- **High Production Support for Long Length Parts:** Larger work area supports component lengths of 24" to 144".
- **Improved Finish:** 4 axis machining can result in fewer cut passes and improved surface finish.



- **Reduced Set Up Time:** Vacuum integrated pallets eliminate need to build custom fixtures for every job, and reduce new job setup times to under 30 minutes.
- **Reduced Cycle Time:** Parts that previously required multiple setups can be machined in a single setup with simultaneous control of the rotary axis.

## Vitex Employee Spotlight

**Eric Becker**, a 25+ years industry veteran, joins us as our new National Sales Manager focusing on new business opportunities in Pennsylvania, New Jersey, Delaware and Maryland. Eric previously held managerial positions in sales, fabrication and quality control with Mideast Aluminum/Sapa, and was a Fabrication and Design Engineer for Indalex working with Harsco, one of the largest global providers to the steel and metals industries.

"What's exciting for me is getting out every day and seeing the inventiveness and entrepreneurial spirit that's alive and well today," adds Eric. "Helping companies and individuals realize their dreams and expectations through our products makes my job fulfilling every day."

**Mark Boback**, another 25 year industry veteran, joined us as Director of Business Development concentrating on expanding our business in the Ohio Valley. Prior to joining Vitex, Mark was Regional Sales Manager at AACOA, a division of Bonnell Aluminum. Having worked with a diverse range of clients from consumer electronics, furniture, lighting and automotive, Mark offers a wealth of insight on profile design and most forms of downstream fabrication and finishing.

"Finding and developing new customers is what I enjoy doing," shares Mark. "It's extremely rewarding to hear from customers, 'I found a supplier who exceeded my expectations'. I know I'll be hearing that a lot in my new role with Vitex."

## INDUSTRY NEWS Use of Aluminum by U.S. Manufacturers Fuels Nations Economy

Lightweight, strong, and recyclable are just some of the sound business reasons you've selected to use aluminum for your products. You should also know that by working with U.S. aluminum suppliers you're helping support our nation's economy. According to Dun & Bradstreet, the U.S. aluminum industry directly contributes \$75 billion to the U.S. economy and employs nearly 161,000 workers.

## COST SAVING TIP Avoid Extrusion Dies with High Tongue Ratios

For semi-hollow profiles, the area of the partially-enclosed void and the mathematical square of the size of the gap is referred to as the "tongue ratio." Tongue ratios (width of the gap vs. length or height) up to 5:1 in most cases are easily extruded. However, once you exceed the 4:1 ratio you begin to surpass the strength of a traditional die causing it to fail. Higher ratios are obtainable, but may require the die be redesigned to reduce the risk of breakage, or the use of higher billet temperatures and subsequently slower extrusion velocities, both of which require more extrusion time and cost.