



A Note from Wendy and Howard...

Hello,

Since our last newsletter in June, we hope you had the opportunity to enjoy some quality downtime with family and friends over the summer season. While downtime is something to look forward to in our personal lives, it is anything but welcome in the world of industrial automation. Whether you are running a manufacturing plant, a water plant, a gas plant or any other facility relying on industrial automation, downtime is a dirty word!

If you are searching eBay for replacement parts or downtime is an issue for your legacy equipment, our feature article may be of interest. See how one of our Pharmaceutical manufacturers approached the process of evaluating their options to either invest in new equipment or completely redesign the current equipment and install the latest control system technology.

We are featuring Toby Varner in our employee spotlight this month. Toby was one of our first employees here at Huffman Engineering. Toby is a go-to-resource for our customers and our team; his knowledge and expertise come in handy for a multitude of difficult automation challenges.

From dealing with a legacy equipment challenge to [securing your industrial network](#), when you need an expert to help solve automation challenges, we are here to help. We deliver engineered solution tailored to your automation needs. Visit our [website](#) for more information on our areas of expertise, or call us (402) 464-6823 for a free initial consultation.

Thank you for your interest in Huffman Engineering.

Best regards,

The Huffman Engineering Inc., Team

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The Legacy Equipment Challenge at a Pharmaceutical Manufacturer

Searching eBay to replace old parts for your legacy equipment? This article details how one customer successfully addressed this challenge.

In the world of pharmaceutical manufacturing, downtime can be a very costly inconvenience. While it was “state-of-the-art” when installed, our customer’s 1993 liquid vial filling line and 1985 fluid bed dryer/granulator were starting to cause unwanted downtime. The legacy equipment had been a workhorse operating for the past 20 to 30 years, but the vendors they originally purchased the equipment from no longer offered support. Problems and concerns were mounting:

- Maintenance was problematic due to the lack of part availability; they were having trouble locating refurbished parts, even on eBay.
- The 1985 fluid bed dryer/granulator system was mostly pneumatic, requiring a lot of manual adjustments to dampers, temperature control, air flow, etc. That was not a problem yet because much of their workforce had been with them for decades and have a sixth sense as to when and how to manipulate those manual sequences. However, their dependable operators and maintenance staff were approaching retirement age – how would they deal with all of that intellectual knowledge walking out the door?
- In the case of the 16 head liquid vial fill line, approximately 2.5 million vials per week were being processed at a cost of about \$1 million a week. With the amount of capital running through the legacy equipment, lack of reliability was unacceptable.
- An inflexible proprietary system limited their options. At the time the equipment was made, manufacturers sold proprietary systems that do not easily integrate with new technology. Our customer knew they could benefit from the ability to integrate new technology.



Our customer began the process of evaluating their options to either invest in new equipment or completely redesign the current equipment and install the latest control system technology. Here is the breakdown of that evaluation:

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Spotlight - Toby Varner

This month we are excited to have longtime Huffman Engineering employee Toby Varner in our Employee Spotlight. Toby was hired as employee #7 back in 1993 and has worn many hats within the company.

"What I like best about working at Huffman Engineering is the variety of our work and the opportunities I have been given to try new things and to grow with the company," said Toby.

When he first started, Toby worked in the shop building wiring control panels and helping with project startups. His next roles were doing design and CAD work, before moving into PLC and HMI/OI programming. From there Toby advanced to project engineer, project manager, account manager and his current role as Industry Manager for Life Sciences and Food.

"Toby was one of our first employees at Huffman Engineering," said Howard Huffman, CEO of Huffman Engineering. "He is a hard worker who has risen to the increasingly difficult challenges we have set before him. Toby has a breadth and depth of knowledge of our operations that is critical to our team."

Toby has spent much of his career working on a long list of projects in the pharmaceutical industry, including raw material tank farms, liquids manufacturing and product storage areas, clean in place systems, semi-solids (cream) manufacturing, powder and solids manufacturing systems, liquid and powder fill and packaging, multiple fluid bed dryers, lyophilizer, fermenters, bio-reactors, single use bioreactor, and aseptic vial filling and packaging. Toby has also worked on projects in other industries such as toner manufacturing, ammonia refrigeration control systems, and grain milling and processing.

Toby has been a Nebraskan for most of his life, attending grade school in Goehner and high school in Wilber before moving to Lincoln in 1990. He received his associate's degree in electro-mechanical technology from Southeast Community College, and then went on to study electrical engineering at the University of Nebraska in Lincoln. Toby also has earned his bachelor of science in project management from Bellevue University.

When not at work or pursuing his continuing education, Toby enjoys spending time with his family. He and wife Karin have three children, son Grant (18) and daughters Emily (15) and Claire (11). Rounding out the family is their dog, Winchester. Toby is a hunting and shooting enthusiast, enjoying deer and waterfowl hunting as well as clay, trap and target shooting.



Toby also enjoys spending time with his church, fishing, camping, watching football, and working on home improvement projects.



Toby & Emily, Toby & Claire, Toby & Karin, Grant & Chester the dog

In Case You Missed It...



Partnerships Make Us Successful

Blog post by Evan Kilgore, *Senior Electrical Engineer, Colorado*



Ransomware/Wiper Attack Hits... And the Aftermath

Blog post by Keith Mandachit, *Senior Engineer*



What are Safety PLCs?

Blog post by Tanner Grieve, *Mechanical Engineer*



LED Lighting Retrofit

Case Study

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