



Kevin Browne with a working robot in ESS' 17,000 square foot factory

Dan Smith

## At ESS, it's all about the process >

### Executive Summary:

*This small technology company in Blacksburg remains small on purpose, but its product is as sophisticated and advanced as technology allows.*



We are able to design complex, multi-step procedures without the hours of time and escalating costs that would be incurred were we to engineer the automation from scratch.

—Walt Langosch

### By Rachael Garrity

After weeks of watching Wall Street implode and Washington explode, are you about ready to throw in the towel on American business? Wait. A more careful look reveals that despite our economic climate, there are small private businesses across the country that are managed well, and focused on providing services to other businesses that will spell solvency and even success over the short and the long term. In a phrase, these organizations play it straight.

ESS Technologies in Blacksburg is a prime example. Begun 15 years ago by Kevin and Linda Browne, it is an equipment manufacture and systems integration firm. It serves the pharmaceutical, medical device, cosmetic, diagnostics and consumer products segments of the economy.

ESS designs and installs a production and packaging process that will create the product, wrap it, and prepare it for distribution.

Service has been so consistent, say the Brownes, that 75 percent of the orders come from the existing customer base of more than 200 installations in Virginia and North Carolina alone.

ESS most often uses domestic components and systems, but there is an important exception. To accommodate a necessarily sterile environment with precision necessary in pharmaceutical and medical worlds, ESS often incorporates robots into the systems it designs. Manufactured in Japan by other robots, these bear zero resemblance to any Star Wars denizen.

Walt Langosch, director of sales and marketing for the company, demonstrates

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a robot while he explains: "There are six axes of motion on these robots. We are able to design complex, multi-step procedures without the hours of time and escalating costs that would be incurred were we to engineer the automation from scratch.

"Once the systems are in operation, the efficiency and cost savings continue to accrue. FANUC (the manufacturer) has measured the mean time between failures for these robots at 65,000 hours." If they were running all day, every day, that would mean roughly 7.5 years.

In the medical and pharmaceutical fields, the robots become even more valuable, because they protect the product from the risk of contamination, and protect employees from having to work in a laboratory environment that could spell health risks for them.

The necessary sterile environments (one germ-free, one secure) help limit the

risk of counterfeiting. Products can be traced to their source, time and date of manufacture.

ESS engineers use 3-D design software to create the systems, and the tools and other customized parts that are added to the robots are manufactured by local machine shops. Other than that, all operations are in-house: design, assembly, testing, integration and start-up service.

While ESS remains—intentionally—a small company, with 23 on the staff, both its customer base and its competitors range from small, local operations through large multi-nationals.

"Every solution is custom," Langosch says. "There is nothing off the shelf about anything we provide. For every installation, we take great care to see that the design is efficient, reliable and durable. We may—and do—have hundreds of customers, but we serve them one at a time." 

## TECH / INDUSTRY POLL

In the current economy, is staffing your workforce more difficult, less difficult, or about the same?

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