

Taking control

Wandering through the laboratory, Mike Watson stops and leans over a console of white-faced dials nearly as big as wall clocks. But these don't tell time. They calibrate instruments that control factory processes--the flow and temperature of milk at Dairy Fresh Inc. a few miles away in Winston-Salem, for example, or the volume and mixing of dyes at WestPoint Stevens Inc. textile plants.

Watson moves down the panel, stopping at an instrument that tests pressure gauges. "Pressure in a steam line might be 300 pounds per square inch," he explains. A faulty instrument could let that pressure build until it finds a rusty rivet or weak joint. Two miles under the North Atlantic, the Titanic lies under 6,000 pounds of pressure per square inch. Here at Control Automation Technologies Corp.'s Kernersville headquarters, the company tests instruments to 10,000 pounds.

If anybody knows pressure, it is Watson, 37, the company's president. The son of a tugboat captain, he was brought up to work like the devil and hate debt like hell. He started Control Automation in 1989. Eighteen months in, recession struck. Overnight, he was \$100,000 in debt, using his credit card and a second mortgage on his home to hang on to his two technicians even when he didn't have enough for them to do. Checks from his few remaining customers, also strapped for cash, were slow coming. "Many days, I'd be waiting to meet the postman."

Flash forward. This year, Control Automation, with 26 employees, will have revenues of more than \$2 million, up 40% from last year. It is debt free, with a stash in the bank. Its bread and butter remains a customer list of about 50 Southeastern companies, but it also recently completed a \$300,000 job in Hong Kong. Early next year, it will become ISO 9002-certified, a quality standard that should open up other international jobs.

Another gauge of its success: Control Automation has won BUSINESS NORTH CAROLINA'S third North Carolina Small Business of the Year award, sponsored by United HealthCare of North Carolina Inc. The judges were Scott Daugherty, executive director of the UNC system's Small Business and Technology Development Center; Stephen Benson, president of Matthews-based Morningstar Group Inc., last year's winner; and BNC Editor and Publisher David Kinney.

Control Automation has made a name for itself in a high-tech industry--process-control automation--that is used in nearly every plant in the United States but is virtually unknown to the millions who use the products those plants produce.

In the break room of Control Automation, Dan Raber leans across a table and explains. An electrical engineer who joined the company eight years ago after 30 years with Square D Corp., a manufacturer of electrical equipment and industrial-control systems, he has had a front-row seat to industrial modernization.

"Old operators felt if they put in a little bleach, more would be better, so they'd shovel in some more," he says, referring to textile plants of several decades ago. "If they needed a little steam, a lot more steam would be better. Everything depended on old Joe who'd worked there forty-one years. Consistency suffered. When he retired or died, everybody was lost."

Enter Control Automation and others like it. Today, at textile and chemical makers and other customers, a production line is a string of machines that can stretch twice the length of a football field, controlled by a single operator, often at a remote console, watching on closed-circuit television. Inside those machines, chemicals, steam, water and air are measured and manipulated by control instruments. They send signals to computers through the wardrobe-size control panels Control Automation technicians assemble back in Kernersville. The computers then signal back to the production line when to add, for example,

bleaching agents, finishing chemicals and dyes--and how much--untouched by human hands. The instruments also gauge temperature and pressure.

Complex? Yes and no. The ball in a toilet tank is a float control. Simple. But in industrial practice, the ball might be replaced by ultrasound, infrared or other devices. The goal is efficiency. "Manufacturers have found they can pay for process automation through reduced consumption of utilities, dyes and chemicals alone," Raber says. Another benefit is accurate records. At customers such as Bayer Corp. in Clayton and Dairy Fresh, federal regulators require detailed counts of every batch of drugs or food produced.

There's another factor driving the \$20 billion-a-year process-control industry, according to Glenn Harvey, executive director of the International Society for Measurement and Control, a 46,000-member trade group based in Research Triangle Park. Downsizing manufacturers, even large ones such as DuPont, have disbanded internal instrumentation departments. "Most now leave it up to their individual plants to contract that out to local vendors."

That has created a need for companies such as Control Automation. The top six to eight national companies control about half of the market, Harvey says, but the rest are small companies like Watson's. "It is not a high-volume business, and it's ideally suited to small, niche companies." In Greensboro, at chemical maker Morflex inc., Plant Engineer Greg Lischke says Control Automation technicians visit each quarter to test instruments that monitor the flow of plasticizers and other chemicals. "To a large, national testing company, we'd be just another little customer," he says. "Mike and his people treat Morflex like a big one."

At Control Automation's brick headquarters on the western outskirts of Kernersville, just off Business I-40, there is nothing small about Watson, the founder. At 6 feet 4 inches and 230 pounds, he barely fits into his white Ford Expedition. "Big truck for a big guy," he says. By his account and others', Control Automation is a small business that acts like a big one.

Example: benefits. They include a health maintenance plan, dental coverage, disability insurance and company-matched 401 (k) investment plan. "Most of these are young guys starting families," Watson says of his 26 employees. "If you're going to keep good people, you have to have superior benefits."

Example: training. Watson leafs through a 20-page plan he developed, a laundry list that traces skills needed at each job level and the training and experience necessary to advance. Employees train at Forsyth Technical Community College and other technical schools and through courses offered by the instrument society and equipment makers. Control Automation has in-house seminars, too. "We're a service company," Watson says. "If we can't equip our technicians to go out and make this company look good, then we're shooting ourselves in the foot."

When technicians complained that they were often in the field and had no idea what the company was doing, he started writing a newsletter that profiles an employee each month, along with information on birthdays, new babies and customers.

Trace the company's roots, and they take hold 10 years ago at Red Creek, a restaurant in Rochester, N.Y., where Watson was a design consultant on a job at a Kodak plant. An executive of an industrial-instrument manufacturer was grouching that his equipment usually got installed by plant personnel. He was looking for a company that would do the job with trained technicians.

"I told him I could put it together," Watson says, "and had always wanted to. He guaranteed me at least a year's worth of business, so we sat there that night in the Red Creek, laid out some bar stationery--napkins--and sketched out our business plan."

The part about always wanting to do it was true. Watson grew up in Hopewell, Va., on the James River below Richmond. When he was 8, he sensed a connection between magnets, wires and the batteries that powered walkie-talkies. "That was my first experience with electricity. I decided to see what would happen if you hooked them all together and connected them to those two little holes in the wall. It almost blew the fuse panel out of the house."

His father, Ronald, was a millwright and, along with his mother, Viola, owned a tugboat company on the river. "It was a tough life," the son says. "You worked 24 hours, three days on and two off."

He studied mechanical engineering at Old Dominion University for two years before scrapping that notion. "I wanted to get my hands dirty." He became a mechanics helper at an Allied Chemical Co. plant in Hopewell and was fascinated with the gauges and controls that ran the factory. He got an associate's degree in instrumentation from New River Community College in Dublin, Va., in 1983.

After jobs that took him to Maryland and Illinois, he moved to Winston-Salem to join Instrument Control Service Inc., a Pensacola, Fla.-based company that had a contract with R.J. Reynolds Tobacco Co. He supervised controls on three RJR lines, gaining management experience for a role he insists he's still not comfortable with. "My background is technical," he says, rummaging through the nuts and bolts of the company's tool crib. "All this management stuff has come hard."

He then became a design consultant and project supervisor for AC Corp., a large Greensboro-based process-automation company. It was on an assignment at Kodak that he met Michael Flannagan, the Taylor Instrument Co. vice president. Returning to King, the town north of Winston-Salem where he lived then, Watson set up Control Automation in his bedroom and garage. He accumulated \$20,000 in start-up money but found working capital hard to come by. "I've always been aggressive, a risk taker, but the bank I started with wasn't." When First Citizens turned him down, he turned to Southern National, now BB&T, which offered him a \$25,000 credit line.

Watson prospered and pumped the money back into the company, sometimes spending as much as \$10,000 for a piece of testing equipment. He expanded into a shop in north Winston-Salem. But then the recession hit. "We had focused on project work, and projects stopped."

As companies put plant expansions on hold, Control Automation frantically switched to maintenance contracts, often \$100 or \$200 jobs. "We found customers that had been ignored, like little hosiery mills and textile and chemical plants that big process-control companies didn't pursue." Watson took out a second mortgage and tapped his credit line to meet his \$70,000 payroll.

"I still have nightmares of 1991," he says. "There is no feeling in the world like going to work every day and waiting for someone to knock on your door and ask for money. But the way I'd been brought up, bankruptcy was never in question. If I'd thrown in the towel, I would have still had to pay off the debts anyway."

Watson remembers the turning point. On a September day in 1992, the news was still full of the damage Hurricane Andrew had wreaked in Florida when Watson's phone rang. MagNox Inc., a Pulaski, Va.-based manufacturer of film coatings, had a \$100,000 project. Soon, Watson found himself signing other contracts, including one with what was then Fieldcrest Cannon Inc. in Kannapolis.

By the end of 1992, sales had doubled from the previous year, to \$500,000, and the company expanded to a half-dozen technicians. In 1995, out of debt and able to chase bigger deals, it moved to its present gymnasium-size building. Sales climbed to \$1.5 million. "Partly, it was a matter of the rising water that floats all boats," says Raber, an applications engineer who, along with Rob Igoe, a technical expert Watson hired out of college seven years ago, are Control Automation's senior employees. "But

beyond that, we began working our way into the three separate kinds of things we do today."

Those mainstays are instrument installation, maintenance, and testing and calibration, particularly for companies like Morflex that are ISO-certified or are seeking certification. "It's been a learning cue for both of us," says Lischke, the Morflex plant engineer. "Their technicians have brought some things to the table that have helped us improve the reliability and accuracy of our instruments. But I hope, too, they've been able to pick up from us some things about how we do business that have helped them deal with other customers."

Control Automation's growth also has been fueled by innovation. For instance, it offers time sharing of its specialists, much the way it works with a house at the beach. Called TechShare, the program allows small manufacturers to rent a technician for a scheduled day of a week or month to handle maintenance of their process-control systems.

In the assembly shop in the back of Control Automation's building, the kind of installation work that fizzled in the early 1990s is back in force. Watson pokes into the open doors of gray, metal control cabinets, some a foot taller than him. Technicians are installing scores of input and output blocks, junctions where analog--pulse--signals from plant instruments will be converted to the digital language of computers.

If recession returns, Control Automation will be better prepared, Watson says. "We've got multiyear contracts and a solid customer base," he says, including a growing number that award Control Automation projects on a no-bid basis. The company will soon take over more of the electrical and mechanical work it sometimes contracts out, enabling it to control the quality of installations better.

Eight years after Watson was beating the bushes for minor maintenance contracts, Control Automation's scope is considerably broader. A recent contract to provide technical supervisors for installing control systems at the new Hong Kong International Airport--there were 25,000 control points in the massive project--paves the way to more foreign work, particularly in countries where process automation is still in its infancy, such as Mexico, Tunisia and Jamaica. Still, Watson sees the bulk of his growth coming closer to home. The business plan calls for branches in Eastern North Carolina, South Carolina and eventually around Richmond, Va., with the staff increasing to about 40.

Watson leans forward over a round conference table in his office, surrounded by family photos--wife Amy, sons Cody and Adam--and talks about eventually putting Control Automation more on autopilot. That will permit him to pursue grass-roots Republican politics and eventually, he says, possibly run for office. Along with the family pictures in his office are others--Watson with House Speaker Newt Gingrich, and former Sen. Robert Dole. "I'm fiscally conservative, so I think that's why politics appeals to me."

He recently named two vice presidents: Perry Meyers, who heads operations, and Alvin Ratledge, who heads technical services. "I hope at some point this will pretty much operate on perpetual motion," Watson says. "We've developed a good core of key people to rely on."

Foresight has been, well, instrumental. "We have a vision of what we want to look like in the future. We don't want to go back and redo things every few years as we grow. That's why a lot of the things we do today are bigger than what you'd expect for a company our size."

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