

Profile



Closets, cabinets and computers

Reno shop says CNC technology is a perfect match for its closet business

Nested based — Using a Biesse Rover CNC router with nested-based manufacturing gives California Closets in Reno, Nev., a competitive edge.

Shop Snapshot



Company: California Closets
Location: Reno, Nev.
Proprietors: David and Kim Wilhoyte
Primary products: Storage and organization solutions for home, office and garage.

Employees: 3

Shop size: 4,500 square feet

Key equipment:

- ▶ Biesse Rover B 7.40 FTK
- ▶ Brandt KD 55 edgebander
- ▶ Thomas Machinery return conveyor
- ▶ Belfab 5000cfm Hummer dust collector w/ tilt-truck bins
- ▶ Schmalz Jumbo Ergo 110 vacuum lift
- ▶ Felder KF700 saw and shaper

David Wilhoyte didn't need a crystal ball to interpret the negative business indicators looming over his business in 2004. Not quite two years into ownership, the small cabinetmaking and custom wood shop was realizing double-digit growth that didn't seem sustainable to Wilhoyte in light of skyrocketing fuel prices, labor shortages and rising materials costs. Wilhoyte's 15-person shop and California Closets franchise located in Reno, Nev., was about to be challenged in ways familiar to most small wood shop owners.

Getting to shop ownership

It had been a while, but Wilhoyte had seen this before when he was a "turn-around" consultant hired to revive struggling businesses. Wilhoyte learned several skills in the building trades as the son of entrepreneurial parents. After college, he tackled marketing jobs with Walt Disney World and SegaGameworks. But as he advanced in his business management career, Wilhoyte found himself spending less time in meetings and

more time in the field directing build-outs and working with various woodshops and scenic designers. When presented with the opportunity to buy a California Closets franchise in 2002, the entrepreneur with woodworker's instincts acted quickly.

"We started out as investors – with a partner who was going to manage the day-to-day business," said Wilhoyte. "Unfortunately, things didn't go as planned. I knew we had a good product and reputation, but rapid growth in an environment of labor shortages and rising material costs were putting strains on our cash flow. Moreover, the dynamics of our partnership were turning hostile, and the employees were starting to jump off what they viewed as a sinking ship. Ultimately, I believed that we could turn this around – but only if there was a clear leader. So we bought out our partners."

Alone in search of advice

Flash forward to 2004, when Wilhoyte tapped into his consulting experience to assess his own shop's

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chances of survival. He quizzed equally challenged franchisees and cabinet shop owners and interrogated machinery sales reps. Working with his wife — a skilled businesswoman in her own right and a talented designer — they implemented systems to cut costs and improve efficiencies while expanding their product lines to meet the demands of the marketplace. But Wilhoite knew that this could only help so much — he had to find the solution that eluded others facing the same brutal market conditions. Wilhoite suspected technology was the answer, but it was neither an easy nor inexpensive fix.

High-tech, big ticket gamble

Enter Dan Radusinovich of Biesse America, who traveled to Reno to meet with Wilhoite. He toured the 4,500-square-foot shop before



Return on investment — Shop owner David Wilhoite added this Thomas Machinery return conveyor to his Brandt edgebander so one operator could be more efficient. Now edgebanding and CNC work continue simultaneously with one worker.

proposing a huge investment in a state-of-the-art CNC system rarely found in shops this size.

Radinovich had installed CNC machines in larger shops, but he had to present a lot of evidence to suggest such a big expense was a smart move for such a small operation.

Wilhoite knew Radusinovich

was right, but he was understandably cautious. "Not only did I have to consider the cost of the CNC router, but also the associated hidden costs," says Wilhoite. "There were utility upgrades, employee training, landlord approvals, downtime for installation and other considerations that had to be factored into the decision.



Up, up and away — Adding a Schmalz vacuum lift made it faster and safer for workers to move sheet materials

Plus, when I looked at the shop as an integrated process, I knew we needed even more investment for material handling equipment and better dust collection. Everything had to change.

“Remember, I couldn’t find answers from anyone who knew about all aspects of my business — from managing throughput to what kind of hurdles I’d face after upgrading the shop,” said Wilhoite. “The reps had good information, but they also had a lot to gain, so I was leery about taking their advice without doing more research. But the more I learned and the more I ran the numbers, the more I became convinced that this was the right thing to do.”

Setting up shop

“Once the equipment was spec’d and funding was in place, the ball started rolling quickly. My goal — to turn a four-man process into a one-man process — necessitated a lot of planning. In addition to the CNC router, we installed a 16-foot jib crane and Schmalz vacuum lift to speed up the panel loading times. We also added a Thomas conveyor to our edgebander so the employee could be productive while the router is running. And the new Belfab dust collector with its removable rolling bin system is faster to empty, cleaner and safer.”

A Pneumatech air dryer rounds out the major elements of the new shop.

In all, Wilhoite invested nearly \$250,000 in the change-over earlier this year. The entire process was scheduled to take five days, but it lasted 11 days when delivery of

some machinery was delayed and getting the added power to the building took longer than expected. On an unseasonably cold January day, Radusinovich again flew cross-country so he could be present for

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the installation and computer training at the Reno shop.

In a few days, the leap from a beam saw, line borer and table router to automated cutting and boring machinery was complete. Wilhoyte and another shop worker were the first trained to use the system.

Getting up to speed

Wilhoyte says the process of switching to the new system presented some unexpected challenges.

"The hardest part for us was not the software — we used the integrated BiesseWorks package that came with the router. We quickly learned how to design a component and then parametrically change it for each project," he says. "Each piece — whether it's for a closet, Murphy bed or a cabinet — is saved, and over time we've created a rather

Not just closets

— While the franchise name is California Closets, Wilhoyte's shop does more than just closet systems as evidenced by this home office and a built-in unit next to a fireplace.



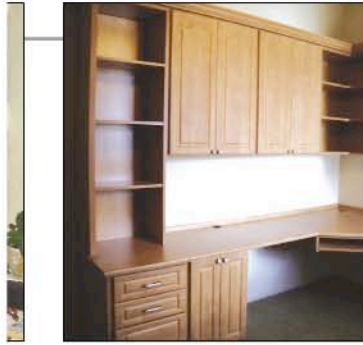
extensive library of parts. Now, we can quickly pick from the library and tell the machine the quantity, and it does the rest. We just load and go."

With software under control, Wilhoyte discovered there was still more to learn. "The hardest part has been learning the nuances and science of the router tooling," he says. "We burned-up several bits and went thru many sheets of melamine and even a few spoil boards until

we learned the proper tooling set-up. Getting the proper feed rate and rotation speeds and resulting chip-load isn't an exact science and until you get this dialed-in, you are not as efficient."

Winning proposition

Six months later, Wilhoyte already feels he made the right choice even though he doesn't expect his small shop to fully benefit from



installing the CNC equipment for another year or so.

"We're still making adjustments and learning better ways to operate, but already, these changes have reaped a lot of rewards," he says. "The nesting capability of the router has reduced material waste by over 12 percent, which includes our training period when mistakes were more common."

He says the system has also reduced his inventory cost considerably. "We used to have on-hand anywhere from \$10,000 to \$12,000 of sheet goods. This last month, we had less than \$6,000 worth, and sales are way up," he says. "Whereas before we were barely keeping up in production, now we stay well ahead of installation, plus we have the extra through-put capacity to keep up with our growth."

He says the shop is doing nearly double the volume it produced when he bought the company with the same number of employees. Furthermore, even with recent rises in melamine costs, the shop's percentage cost of goods sold has actually dropped. "And now, the faster we grow, the more efficient we become," he adds.

Extra benefits

Besides the obvious contribution to the bottom line, there are other benefits of the new manufacturing system, he says.

"Other benefits are easy to see. For example, safety has improved," says Wilhoyte. "Now one operator can lift the 80- to 90-pound panels with the vacuum lift. Before it took two guys to hoist the sheets."

He says employees who have

been with him for several years have expressed appreciation for the extra training that has given them new skills and kept them up to date. "I'm rewarded with loyal employees who are fully vested in

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their jobs and the success of my business," he says.

An unexpected benefit is more control over time spent working in the shop since Wilhoyte added a DSL high-speed Internet service and webcams so he could assist as



At the controls — *Wilhoyte says software and programming were not the most difficult part of adding a CNC machine to the operation. Instead, he points to tooling issues as requiring more attention.*

needed while traveling or working from home.

From questions to answers

Although Wilhoyte will likely always ask questions when meeting other shop owners, these days he's pleased he can help others by providing answers as well.

"I've recently found myself in the familiar position of advising others facing the same sorts of problems and decisions I encountered," says Wilhoyte.

"Often I learn a thing or two myself while working out a problem with another shop owner."

Wilhoyte is so confident that his investment in technology will pay off that he has already moved on to a new project: He is exploring GPS and barcode technology to make his business even more profitable. □

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Stiles Machinery Homag beam saw	258
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