Hot Off The Press

Energy Savings Drives Printer to Upgrade Compressor

A commercial printer is a custom manufacturing business — in essence, a job shop. Nothing is off-the-shelf. Every piece is made to order. Customers are deadline oriented and price conscious. It's a highly competitive marketplace, and increasingly a printer's success depends on satisfying customers so well that they choose one company as the sole source for print. That's a tall order.

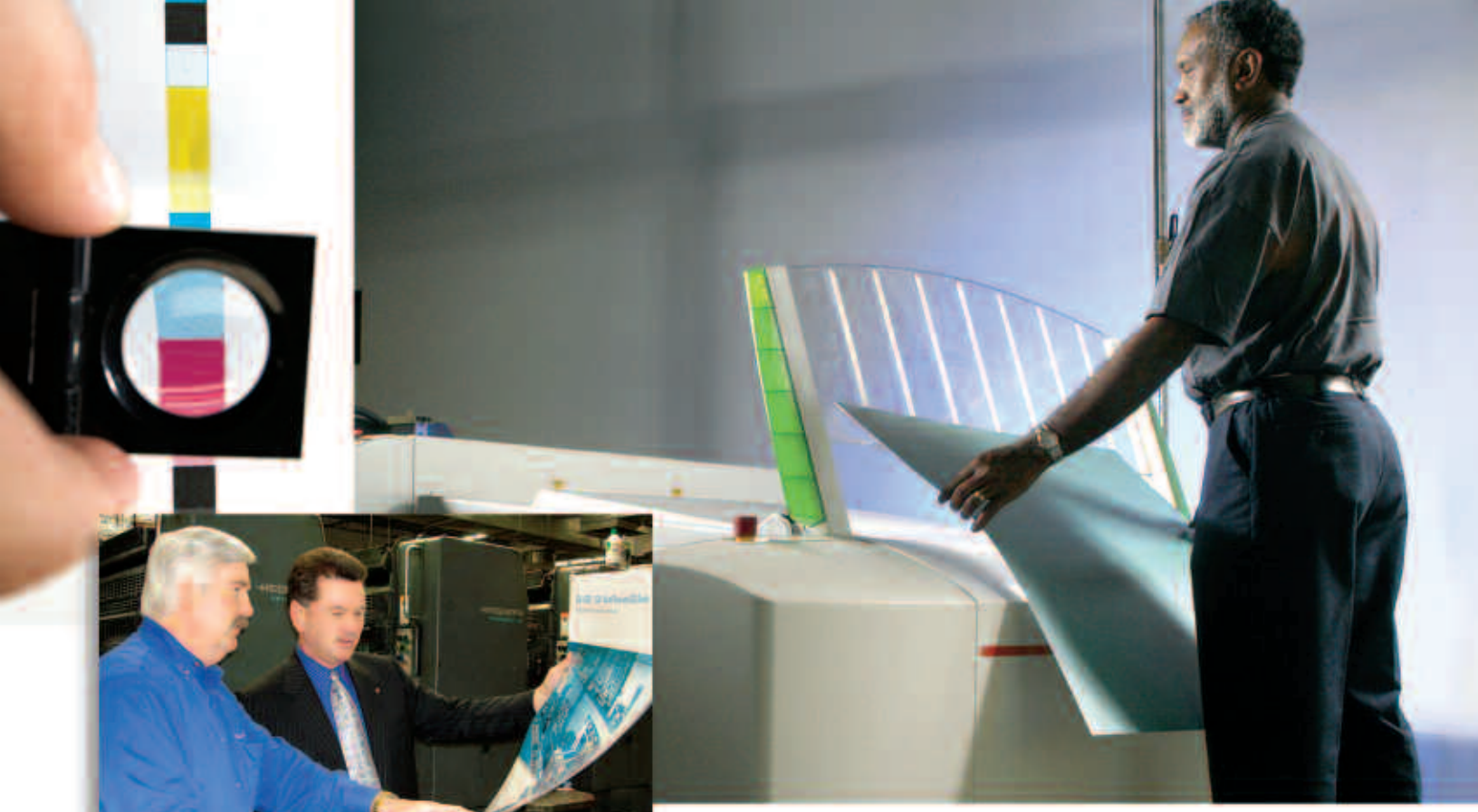
"Growing a successful commercial printing business requires insight into why a client awards work." So says Kevin Kervick, owner of Bassette Company, a commercial printer that has been doing business in Springfield, Massachusetts since 1898.

"It's not because we're a printer. Other printers have the same machinery we have. We get paper and ink from many of the same sources. The end result is typically the same — something in print. But we sell, and our clients buy, much more than print."

Kervick says his goal is to reduce the time, costs and grief associated with acquiring print. "By approaching the entire print supply chain as a process, we help our clients cut costs and improve efficiency in the management of their print purchases. Consistently following through on this approach offers our clients added value and gives Bassette an important point of differentiation that keeps customers coming back — ideally as their sole source for print."

Printer as Manufacturer

A commercial printer's manufacturing operation starts with prepress activities such as plate making. Next, it moves through printing presses where up to six colors of ink are applied to paper, and then continues through the bindery where printed pages are assembled into finished publications. Throughout Bassette's operation, compressed air is an essential resource.



"Every department in our manufacturing operation relies on compressed air," according to Jeffrey C. Scott, Vice President of Manufacturing at Bassette. "Compressed air is part of the printing process from the earliest stages. In the prepress department, our plate making machine uses air to open and close its main door and to insert and remove the plates."

Printing typically requires paper, and Scott explains that Bassette maintains an extensive inventory of paper on site in order to address customer needs quickly. "The paper must be stored within specific levels of temperature and humidity," says Scott. "Our humidification system uses compressed air to force water through misting nozzles. From the floor level, it looks a lot like a fire sprinkler system, but the special purpose nozzles spray an ultra fine mist that dissipates rapidly. Sensors keep the humidity level within a narrow range."

Plates and paper come together in a printing press, and compressed air controls the point of contact. "Our printing presses won't move without proper air pressure," says Scott.

"Compressed air engages the printing press's roller system, feeder, coater and pumps. The whole press literally stops without compressed air. Pressure that maintains the precise degree of contact between the back cylinder and impression cylinder relies on compressed air. If the pressure is off, the ink won't transfer properly. Too much pressure and the ink is squished across the paper, too little pressure and it doesn't transfer at all. A reliable source of clean, dry air is crucial to manage that point of contact."

Another resource for printing — water — is delivered to the plates pneumatically. How does water figure into offset printing? "Oil and water don't mix," Scott explains, "and ink is oil based. A printing plate is designed to leave a thin layer of water where you don't want the ink to go. In simple terms, the ink goes where the water isn't."

After paper is printed, the pages are sent to the bindery where they are assembled into finished magazines, brochures or books. The KleenStick™ machine uses compressed air to apply adhesive onto paper, for example to glue a pocket folder together. On the stitcher, which staples books together and trims finished edges, compressed air is used to expel paper waste which is then accumulated for recycling. The shrink wrapper, which packages finished pieces into neat bundles for distribution and storage, is pneumatic as well.

The System for "House Air"

For 12 years, Bassette has supplied compressed air for use throughout the plant ("house air") with a 30 HP Atlas Copco GA22 air compressor system. "This compressor has been a champ," says Kervick. "I can't think of any service or maintenance problem we've had with it at all. It's an integral part of the operation. If the air goes down, a lot of our manufacturing would stop. Fortunately, in all the years we've had that unit, it's never gone down even once. It never occurred to us that we should be looking at replacing it."

In fact, it was the electric utility's idea. In 2005, Bassette was approached by Energy Alliance about upgrading lighting in the plant to improve energy efficiency. "It's almost

"Other than normal maintenance, our Atlas Copco compressor has been stable gear. It just works. It's one of those things you don't have to worry about."

Jeffrey C. Scott, Vice President, Manufacturing

always a smart decision to invest in more energy efficient equipment," Kervick believes. "Energy Alliance brought in our power utility and arranged for us to get rebates for reducing our consumption of electricity."

As a result, Bassette upgraded lighting throughout the entire factory, installed a new plate setter, and provided employees with Kaizen training focused on improving efficiency with large machines. During their energy audit, the utility identified the air compressor as an additional source of electricity savings through upgrading.

Kervick admits he was hesitant to replace a piece of equipment that was long since paid for and had never malfunctioned. He wanted proof. Gerry Carney, Sales Engineer from Atlas Copco New England Compressor Center, provided it.

Carney installed monitoring equipment on Bassette's existing Atlas Copco compressor to track electrical consumption. "Their 30 HP Atlas Copco compressor had served them reliably over the years," Carney explains, "however, their production demand coupled with the ever escalating cost of electricity in New England suggested that there could be a better way to control cost."

Analysis of the results showed that the increase in energy efficiency offered by a new compressed air system would result in annual electricity savings of $7,600.

"The monitoring data made it clear that purchasing and installing a new compressor was the smart decision," says Kervick. "When we realized we would be replacing a piece of equipment that had been rock solid, there was no discussion about who would supply the new unit. It would be another Atlas Copco."

Carney recommended a 40 HP Atlas Copco GA30VSDAFF WorkPlace Air System equipped with an energy saving Variable Speed Drive and a built-in refrigerant dryer, all neatly contained within a single compressor enclosure.

Atlas Copco's VSD compressors — which match the production of compressed air to the demand — are so energy efficient that Western Massachusetts Electric Company offers their customers a financial incentive to upgrade from older compressors. In this case, Western Mass Electric offered Bassette a $9,600 rebate. That is in addition to the estimated $7,600 in annual electricity cost savings from switching to VSD technology. "Payback on our investment will be less than 18 months," says Kervick. "That's a no-brainer."

Carney points out an added benefit of upgrading. "Atlas Copco's new product warranty covers all parts and labor, except consumables, for five years. This is by far the best warranty in the industry."

Preparing for Surge Business

Bassette's new compressor system provides the ideal balance between daily operating efficiency and the ability to handle excess capacity from what Kervick calls surge business.

"In the print business, large blocks of business often come in at once," says Kervick. "You never know when surge will happen, but when it does you're faced with the challenge of meeting the needs and demands of multiple high priority jobs."

To ensure those demands can be met, Bassette chooses to maintain a functional level of excess capacity. "High end printing presses like our Heidelberg SpeedMasters are long-lived pieces of equipment which are typically depreciated long before their useful life has passed," Kervick explains. "The failure of many commercial printers has also created a glut of used equipment, so we couldn't expect to get much by selling our older presses. For a small investment we can keep some older presses in good working condition and our staff cross-trained. That way, when surge business arrives we can prevent bottlenecks and keep clients satisfied."

With this strategy in mind, Bassette has chosen to keep its older model Atlas Copco compressor as a backup. "It's never given us a problem of any kind," says Kervick. "Given that great experience, we're keeping it online in case we ever need it. Compressed air is just too critical to be without."

The F.A. Bassette Company was founded in 1898 by business partners F.A. Bassette and William C. Lawton, who began their printing operation in the Elektron building in Springfield, Massachusetts. Today, under the leadership of owner Kevin Kervick, Bassette Company is a growing business that does much more than put ink on paper.

The company's approach to growth is rooted in what Kervick calls the Manage-Smart™ system of print procurement. The goal is to become the sole source of printing for his clients by reducing the time, costs and grief associated with acquiring print. By approaching the entire print supply chain as a process, his team is able to help clients cut costs and improve efficiency in the management of their print purchases.

For more information: www.bassette.com