

Versatility of the Minster P2H Helps Cardell Become a Product Development Innovator.

When the people at Cardell Corporation needed high-speed capability for an important new customer several years ago, they decided to give Minster's innovative Pulsar a try. Now, twelve years later and facing a brand new challenge, they're calling on Minster's Series P2H precision straight side press to meet their ever-changing manufacturing needs.

"We were looking for versatility and flexibility this time," explains Bill McCardell, president of the Michigan-based company. "We like to keep our presses well utilized. I don't need a big press that we can only use 20 percent of the time, with it collecting dust the rest of the time. We might have a major piece of business that suddenly goes away, and we can't afford to get stuck with an unused 100-ton press.

"The P2H allows us the versatility of variable stroke and high speed to keep our investment working all of the time. Instead of buying two presses and operating them half the time, I can use one P2H full time."

Minster presses were best suited overall for the Cardell product line and operational methods, the company head explains. Bed size, speed and convenience features were major considerations in deciding which equipment to purchase.

Designed for universal stamping applications, the P2H presses feature adjustable stroke and quick access slide with a motorized shutheight adjustment to expand use of the machine from flat blanking to multiple forming or drawing operations. The rigid guiding system, combined with hydraulic overload and clutch and fast braking, provide the ultimate in part precision, die life and productivity.

According to Cardell officials, the P2H has most of the same benefits and features that attracted them to the Pulsar -- accuracy, repeatability, and quick setup -- but on a much larger scale. The timesaving quick lift slide feature, low overall noise level, and similarity of the machines were additional benefits gained by staying with Minster.

"The P2H's variable stroke provides us with what we feel are broader options," says John Eago, supervisor of Cardell's stamping operations. "One of the specific applications for the adjustable stroke is the lead frame work that we do. Some of the jobs have quite long progressions and a number of blades standing up, requiring a longer stroke. Other jobs are less demanding, but have a fair amount of blanking in them allowing us to shorten the stroke and increase the speed. Within our product lines, we have quite a few applications for the P2H."

Cardell presses must be type-of-work oriented, rather than job oriented according to Larry Terryn, manufacturing manager. "That's one of the reasons why we favored the P2H. We may not need those longer strokes on many of our jobs,



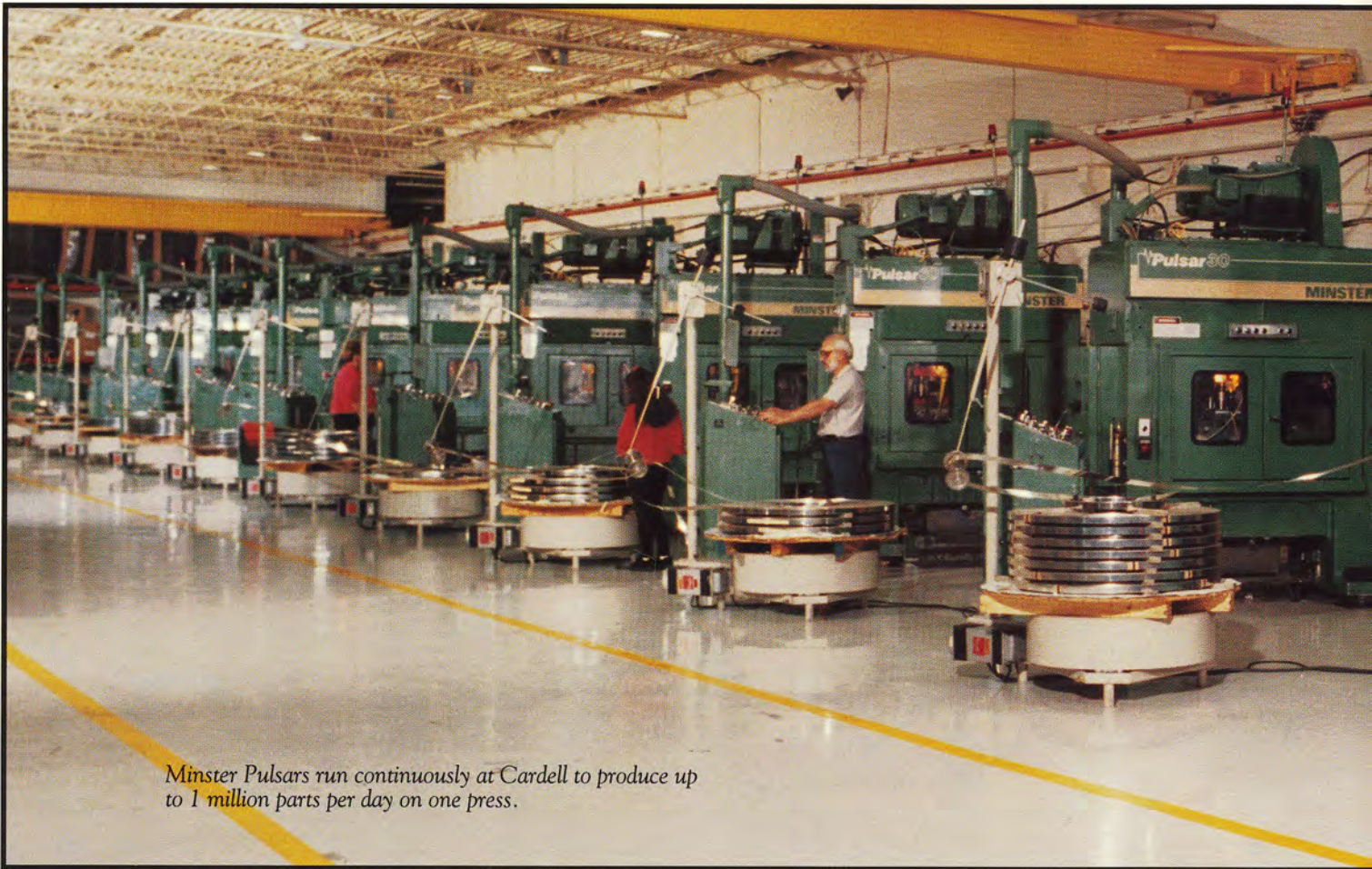
but when we do, the press is invaluable. We may sacrifice a little bit on speed in order to make sure that the press can be used around the clock."

Operating three shifts a day, Cardell has plenty of work to keep their presses running. One particular process involves four days of continuous operation -- a challenge easily met by the rugged Minster presses.

Some incredible numbers have come out of Cardell's manufacturing equipment during recent times -- up to 1 million parts per day on a single press. "You could say that we try to get our 'pound of flesh' out of the machines," McCardell laughs. "But those high numbers are exactly the reason why we depend on the Minster press.

The addition of this Minster P2H-100 has helped Cardell Corporation progress to being a product development innovator for their customers.





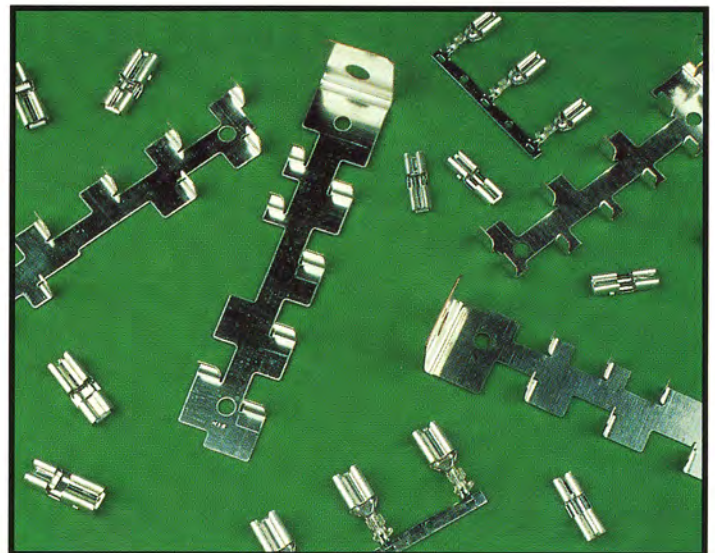
Minster Pulsars run continuously at Cardell to produce up to 1 million parts per day on one press.

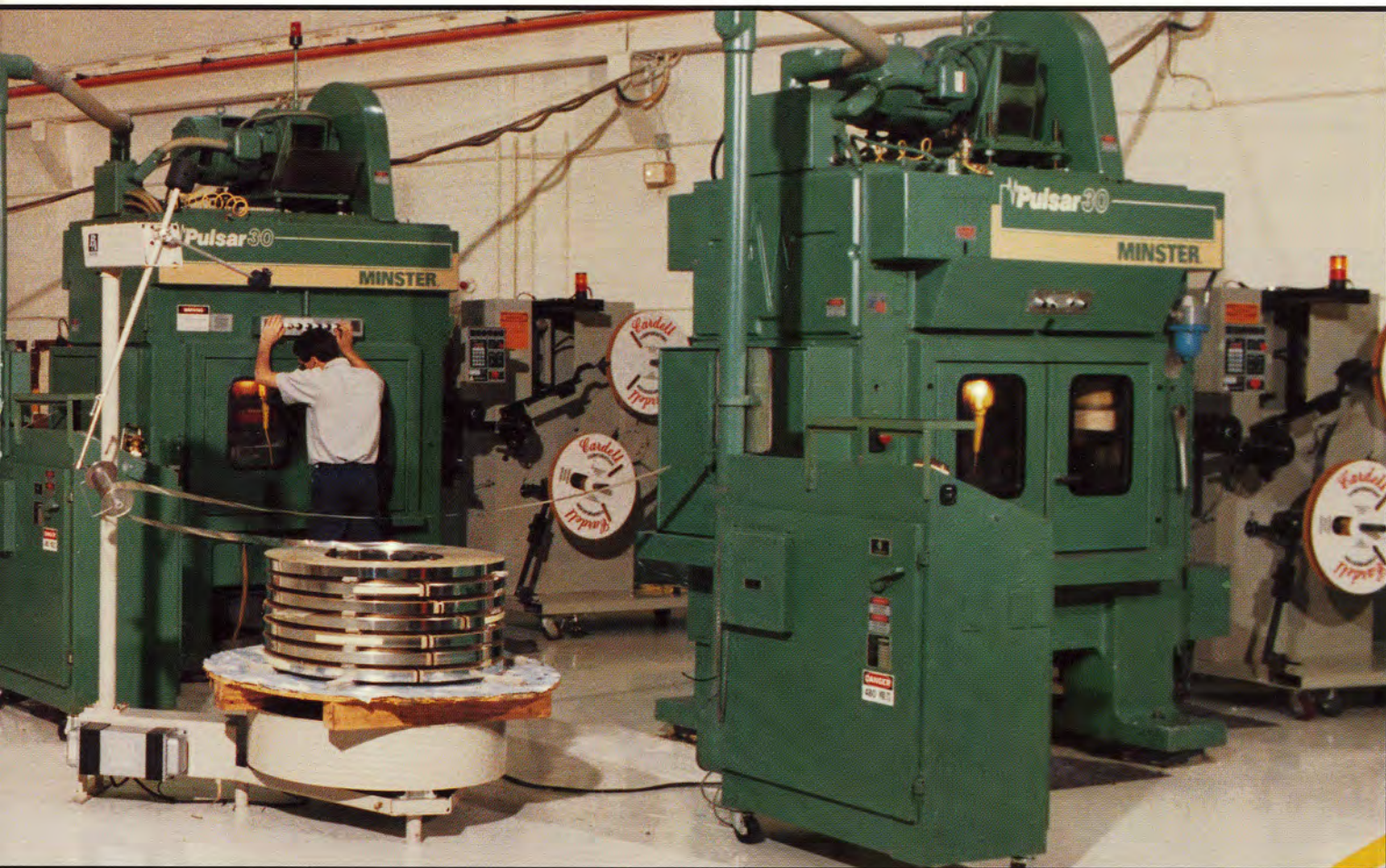
“Let's face it, machinery is extremely expensive today. I would never buy a press at today's prices if I couldn't get the speed and the uptime out of it that I need, and then be able to push it to the limit. “My philosophy is that if you purchase a 1000-stroke press, you'd better run it at 1000 strokes. If you only need to run 300 strokes, go out and buy a 300-stroke press. But my presses have to run at those high speeds, and they have to run all the time!”

Cardell, which currently supplies automotive stampings to the Big Three has received major quality awards from all three of the U.S. automobile giants. One of the companies claims that Cardell equals or exceeds the quality and productivity of any supplier in the world. Quality and engineering have been the keys to success for Cardell, according to company employees.

“We think that Minster presses have been an important reason for that success, “McCardell says. “The press by itself won't get you there, but it has certainly been one of the tools that we have consistently used.”

The working partnership with Minster has been another important tool for the successful Michigan company, according to Larry Terryn. “Unlike some companies, Minster is interested in more than simply building presses; they are actively involved with making their product better for their customers. Because of that, we're very comfortable with the single source direction that we've taken in recent years.



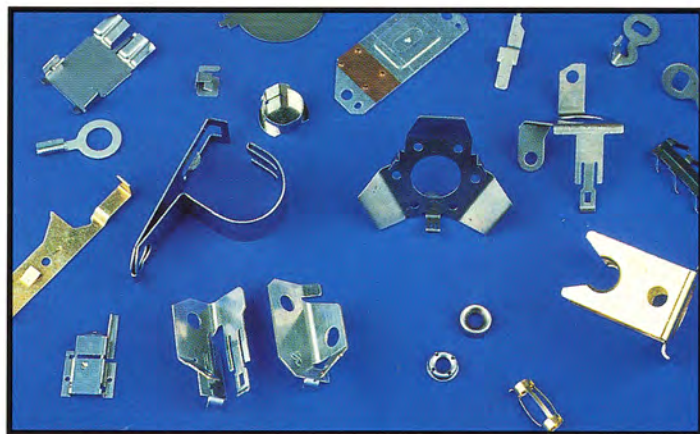


“When you have a company that not only wants to produce the best press on the market, but the very best press possible, then you feel confident that you're not going to get caught behind anyone else.”

A real partnership works for the benefit of both sides. “Who knows what works better than the customer?” Terryn asks. “We obviously have first-hand experience with the press . . . even more than the manufacturer. And as we learn more about the equipment, we can feed that input back to the manufacturer for constant improvement.”

Like many future-seeking suppliers, Cardell has evolved from a simple job shop into a valuable innovator for the automotive industry. “What we're really trying to do is to get out of the contract stamping business,” McCardell claims. “If you plan on being successful in this business, you have to be able to do more than just make a press go up and down. You have to be a whole lot more than just a stamper. We are becoming more of a product development company so we can be our customers' expert in this field.

“We have the laboratories, finite modeling, and all the other full services that allow us to develop a better product for our customers. But the ultimate goal for all this value-added quality and service is still to supply our customers with the best part at the most economical price. Productivity remains the key. You have to be the most efficient producer in the world, and we believe our Minster presses are helping us get there.”



Minster P2H presses offer the versatility to produce either flat blanked parts or larger formed parts all on the same press.