

Retrofit Minster Coil Line Boosts Productivity at Whirlpool Corp.



Retrofit Minster feed line on a 600-ton Verson press at Whirlpool Corporation's Findlay, Ohio manufacturing facility.

It's no industry secret that Minster coil line equipment and Production Management Control (PMC) compliment any material forming operation with complete system integration, greater productivity, ease of operation, and increased production versatility.

However, it may not be common knowledge to all manufacturers that you don't need to purchase a new Minster press to experience the durability and advanced technology of Minster's PMC and coil line equipment. Retrofitting Minster's latest control technology and auxiliary equipment to non-Minster presses or older Minster presses is a cost-effective way to optimize valuable capital equipment.

At Whirlpool Corporation's Findlay, Ohio Division, a retrofit Minster Coil Line and PMC have enabled the company to utilize existing press equipment and manufacturing space to meet new production needs while increasing productivity at the same time.

Jay Hipsher, Lead Process Engineer at the Whirlpool Findlay Division said a front panel part for dishwashers was being produced on a 1000-ton transfer press.

"We were not utilizing the press to its full capabilities," Hipsher said. "Our sister division in Marion (Ohio) had a large project coming on line so we gave the transfer press to them, which required us to run our part on another press.

"We had a 600-ton Verson manual press that hadn't been run for about 10 years," Hipsher continued. "Our goal was to turn the manual press into a progressive die operation with a coil fed line."

Controls Engineer at Whirlpool-Findlay, Paul D. Hunter, said the biggest challenge in converting the press was updating the controls.

"We modified the bolster, removed the die cushions and opened up the die space," he said. "But most of the issues were with the controls, and this is where Minster's involvement was invaluable. They helped us determine what should stay, what should go, what size of drive motor would be needed, and other considerations."

As a manual press, the 600-ton Verson operated at 12 stokes per minute. Hunter said the new controls and drive needed to increase the operating speed to 20 strokes per minute.

“The press was re-wired, and the PMC now controls everything,” Hunter added. “We are able to integrate the functions of the Minster coil line as well. The operators have been able to adapt very well with minimum training. Also, Minster worked seamlessly with our local electrical and mechanical contractors, making installation that much easier.”

Because Minster designs its PMC as an “open architecture” system, Hunter has been able to program additional functions into the control.

“We ran the same job before with three people,” Hipsher said. “We had two people stacking the parts and one person operating the press. We decided to integrate new automatic part handling equipment after the part is stamped, which enabled us to operate the press line with one person without losing any productivity. Before we had to flip every other part. It was a complicated process.”

The conversion to an automatic system has allowed Whirlpool to increase efficiencies.

“The progressive system is much more simplified, without as many adjustments” Hipsher stated.



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Minster's Production Management Control (PMC) integrates and controls Minster's retrofit coil line, the Verson press and Whirlpool's auxiliary part handling machinery.

The retrofit control and feed line have also made the press much more versatile. Hipsher said they currently run three different dies in the press.

“We figure we can run any job that will fit in there now,” he said. “It gives us plenty of opportunities.”

“We have a lot of confidence in the new Minster line,” Hipsher concluded. “We are happy with the performance, and we have had good experience with Minster equipment over the years.”

The Whirlpool Findlay Division produces 2.2 million dishwashers a year for a variety of different brands, and employs 2,000 people.

Whirlpool Corporation is the world's leading manufacturer of major home appliances. To find out more about the bold innovations and designs that have made Whirlpool a trusted world leader, visit the company online at www.whirlpool.com.