



Two Minster P2 presses are producing parts for the world famous windproof Zippo Lighter.

Zippo Improves Quality with Minster Presses

When you offer a lifetime guarantee for the product you're selling, quality is not a luxury, it's a necessity.

Founded in 1932 by George G. Blaisdell, Zippo Manufacturing Company of Bradford, Pennsylvania has produced over 300 million of its world famous

wind-proof lighters.

And each one

of those lighters is guaranteed, when returned to the factory, to be put in first-class mechanical condition free of charge.

So when Zippo decided to upgrade its stamping operation to produce the brass casings for the lighters, it chose the quality

of Minster P2 presses.

"We were working with a labor-intensive system with a lot of handling of the parts, and we were hoping to improve on that," Zippo Director of Engineering Myron Crumrine said.

And when a broken shaft on an existing press ground production to a halt, Zippo officials

realized they

not only needed the quality a

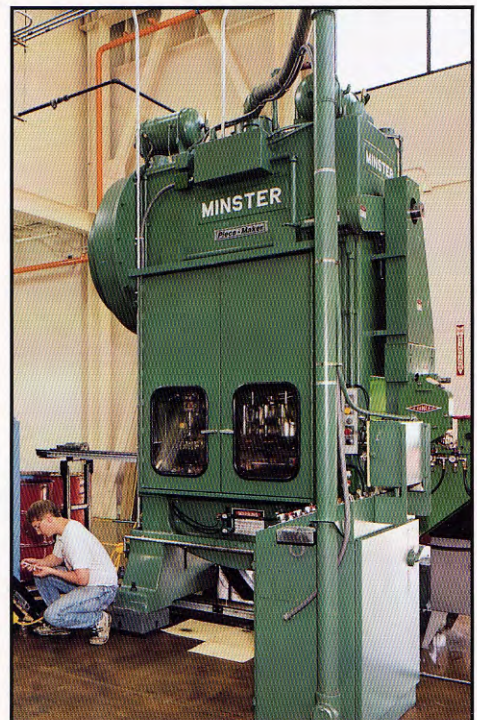
Minster press can provide,

but the service support and reliability associated with Minster.

The company began exploring a progressive die system that would eliminate many of the steps required in producing the casing for the lighter.

The thin rectangular shape of

the lighter created quite a tooling challenge, which the J.V. Manufacturing Company tackled much to the satisfaction of Zippo.



An operator checks the parts coming off a Minster P2 press.

Currently the progressive dies are operating on two separate Minster P2 presses, one of which produces the base or bottom of the lighter, while the other press stamps out the top of the lighter.

Crumrine said the ultimate goal is to incorporate the presses into a conveyor system that will advance the parts to a welding machine for assembly.

With the intricacies of the die, Zippo needed an accurate press, and Crumrine said he's been impressed with the quality of the parts being produced on the Minster presses.

"There's definitely an improvement in quality," he said. "Obviously we're handling it less and putting fewer marks in the surface that have to be removed in



The manufacturing facility in Bradford, Pennsylvania where the stamping is done for the Zippo lighters.

the buffing process. The parts coming off the Minster presses and J.V. Tooling are a straight

flat part and we really see some benefits from that... We are consistently getting a better part, and I think that is a function of the presses as well as the tooling."

Crumrine said besides part quality, the new stamping operation has also realized a significant reduction in production costs.

"The parts coming off the Minster presses and J.V. Tooling are a straight flat part and we really see some benefits from that... We are consistently getting a better part, and I think that is a function of the press as well as the tooling."

Myron Crumrine

Director of Engineering
Zippo Manufacturing Company



Minster presses stamp the top and bottom casings for Zippo lighters.

After many months of development the new system went into production earlier this year, and Crumrine said the Zippo employees on the stamping floor have been very responsive to the Minster presses.

"We've had no problems with the presses. Our operators like them," Crumrine said. "They are very impressed and we certainly feel that is important."

"We visited the Minster plant and were very impressed with the quality of the operation," he added. "And the Minster setup people came here and were very responsive and very informative."