

## Keeping Pace Requires Changing Face

Scott Keller, Wilson Tool International

**Technological advances are literally changing the face of processes within the metal fabrication industry. To maintain a productive organization, you must invest in new technology and process improvement.**



New turret presses like this Amada Vipros King III 3610 support advanced tooling that leads to faster set-ups and tool changes.

Metal fabricators continue to witness a host of changes in both technology and the processes that harness them. From accelerated machine speeds to advances in tool steels, each innovation increases productivity. One first-hand witness to these changes is Humanetics Precision Metal Works, an integrated job shop headquartered in Dallas, Texas.

### Investing in Success

Humanetics designs, manufactures and distributes specialty medical products such as critical-care ICU beds, and manufactures hardware for diverse industries ranging from cellular, telecom and banking to nuclear energy, aerospace, medical and HVAC. While its journey began with a Vela II turret press, the company later integrated sheet metal and machining capabilities in response to the need for more advanced manufacturing procedures.

What started as a single facility consisting of a single turret machine has developed into a global operation comprising 19 turret machines, 23 press brakes and three lasers, along with \$4 million of turret, press brake and Impax tooling. Humanetics produces a variety of sheet metal products in its global facilities, which include a 105,000-sq ft Dallas plant, a 48,000-sq ft plant in Austin, a new 100,000-sq ft facility in McAllen, TX and a recently opened plant in Wuxi, China. "Our Dallas facility alone averages more than 2,200 jobs in-house daily," says Greg Elliott, director of manufacturing. "That kind of volume and variety of jobs makes it critical that all our machines work properly to minimize downtime."

Humanetics' China facility was opened in January 2004 to provide customers located in the Asia-Pacific region with manufacturing services that they have grown accustomed to in the U.S. The facility, located near Shanghai, has direct access to one of the fastest growing industrial sectors in the world. It also allows Humanetics to provide high quality manufacturing services to the many Fortune 500 companies that have made this area their Asian headquarters. Humanetics works closely with Wilson Tool's Shanghai sales office



Process evaluation is critical to delivering premium products to customers. Humanetics evaluates all internal processes to ensure productivity - before, during and after each job.



to ensure the new facility is equipped with tooling to best serve the markets of the Asia-Pacific region.

Elliott and his team of engineers are serious about ensuring the highest level of productivity on their shop floor. "Our productivity is directly proportional to the performance of our tooling, which has increased dramatically in recent years," explains Elliott. "Innovations such as improved coatings and tool steels have more than doubled the average life of our tooling."

Greg Elliott, director of manufacturing at Humanetics, noticed an immediate difference in green-light productivity with the HP tooling. His plant runs three shifts daily, 24 hours a day, 5-1/2 days a week. "Previously, standard tooling typically lasted from one to two weeks before sharpening was needed," he says. "The new tooling on the machines has lasted for nearly eight weeks and still does not require sharpening."

Advances in tool engineering have led to faster set-up times and easier tool change-outs, changes particularly evident with the company's newer turret machines. For example, Humanetics recently acquired an Amada Vipros King III 3610 for its Dallas facility. "We need the right tooling to handle the long-term effects of high-speed punching because these new machines are so fast," adds Elliott.

### Tools for New Technology

Humanetics selected Wilson Tool's High Performance (HP) Thick Turret tooling to handle the job. This tooling provides fabricators with an array of productivity-driven benefits, including hardened tool steel guides for increased durability. The tooling utilizes a quick release stripper plate retention system, making tool changes fast and easy. There is also 50 percent more bearing surface to reduce side loading. This improves hole quality and punch and die wear.



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Timesaving features of the HP line include push button punch length adjustments allowing for click-and-turn adjustments in .005-in increments without disassembly. No shimming is required, and there is no need to measure the punch length. Simply assemble, push and twist to adjust the punch length to the stripper. Punch change outs are made without the need of any additional tools, making punch replacement fast and easy.



With the high volume of fabricating conducted on a daily basis, the HP tooling continues to make a positive impact on Humanetics' bottom line. "The initial cost may be higher than traditional tooling, but the benefits and cost savings of longer tool life and decreased set-up time far outweigh those costs in the long term," says Elliott.

"We noticed an immediate difference in green light productivity with this tooling," remarks Elliott. "We run three shifts daily, 24 hours a day, 5-1/2 days a week. Previously, standard tooling typically lasted from one to two weeks before sharpening was needed. We've had the HP tooling on the machines for nearly eight weeks and have yet to sharpen them."

### Internal Improvements

Beyond an extensive investment in premium tooling and machines, Humanetics has developed a number of internal processes that contribute to reducing overall downtime. Every aspect of the Humanetics' operation is inspected to discover new and innovative ways to reduce downtime. Special tool setups are scanned into a company database, making them accessible to all press brake and punch press operators. This information is readily available to all operators providing for faster set-ups for repeat jobs.

"Operators access the proper product number, keying angle and other relevant data immediately with this system," states Elliott, "ensuring a standard set-up that reduces potential errors." This system saves an average of up to 30 minutes on set-ups alone.

An extensive database of all available tooling resides on a corporate extranet accessible to all Humanetics customers. Nearly 40 percent of them actively utilize the tooling library before beginning to develop a part. Engineers can design a part using the current tooling inventory, or they can adjust their parts according to the existing tooling inventory.



Continually evaluating internal processes and investing in advanced equipment are keys to maintaining a productive organization.

"Because of our large tooling inventory we rarely need to special order tooling," says Elliott. "However, if we do need to special order, waiting several days is not an option. Our customers depend on us to provide them with fast turnarounds, and we rely on our tooling partner to always deliver our tooling as quickly as possible. In fact, there have been occasions where Wilson has delivered our specials and we have them loaded in our machines before other suppliers had even delivered a quote."

Elliott is pleased with current internal processes. "Although maintaining the database and extranet can be challenging, we firmly believe our approach not only gives us an edge, but provides a unique advantage for our customers too," he remarks.

New technology and tooling advances continue to positively impact the bottom line. "Regardless of the size of your facility, pay close attention to your productivity and expenses, and look for ways to improve them," concludes Elliott. In other words, keeping pace means being prepared to adapt to change.

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