

Grinding It Out

C&B Machinery Meets Rigorous Demands with Installation of Manufacturing Cell

Matthew Jaster, Senior Editor

As a customer-driven organization, C&B Machinery's clients come with various production requirements and challenges.

This might simply be an error-proofed part changeover without the use of hand tools, avoiding part-to-part contact so gear teeth are not damaged and a design that will provide low costs and short downtime to retool for a different product. Flexibility is of the upmost importance when products and volumes change as rapidly as they do in gear manufacturing.

"We design, manufacture and completely integrate our machines with the required automation and robotics to produce a 100-percent turnkey manufacturing cell," said Fabrizio Tarara, vice president at C&B Machinery, headquartered in Brighton, Michigan.

A History in Double Disc Grinding&Retooling

C&B Machinery was founded in 1980 by the current owner and CEO Joe Parker. The company started off specializing in the maintenance, rebuilding, and re-engineering of all types of grinding machines. Over time, C&B Machinery became well known for its double disc grinding machine offerings. They also work with brands such as Besly, Gardner, Mattison and Blanchard. In 2017, C&B celebrated the 10th anniversary of their DG-2H series of double disc grinding machines. The machines are completely designed, manufactured and assembled right here in the United States.

In addition, C&B has completed hundreds of retools in its 35+ year history on all types of grinding machines. A retool offers customers a way to utilize their existing capital to run a new line of parts. C&B can also complete upgrades to the grinder that will lessen machine wear over time and increase uptime.

The Automated Advantage

According to Tarara, the recent integration of robotics and automation into C&B's machine tools has improved the precision, accuracy and quality of various components.

"The integration of robotics has been a game changer. They offer the flexibility demanded by our customers to be able to not just handle one part type, but a family of part types in one system. Our manufacturing customers have learned that future flexibility is the competitive advantage they need," Tarara said. "These machines can be upgraded and retooled to process additional part types at a fraction of the cost as our competitors."

The entire manufacturing cell is meeting the rigorous demands of C&B's end customers for their automotive production rates. It also maintains the strict requirements for a 15-minute or less changeover from good part to good part.

"The overall design of this cell has made this requirement easily attainable and eliminated old processing designs where gear teeth were touching each other on the old conventional handling systems," Tarara said.

And the only hiccup during the process was aligning the machine with the customer-supplied automation. "This was a minor challenge that was overcome rather quickly," Tarara said. "Once the machine was properly aligned the design, engineering and manufacturing work shined."

Tarara and the staff at C&B Machinery were surprised at just how robust the automation

and overall machine design was once these manufacturing cells were up and running. The combination of the basket/tray automation systems with the company's indexing staging table easily met customers cycle time requirements.

"The precision and accuracy that these robots can load our machines at is incredible. The true success is attained in the part quality. C&B Machinery continues to be a market leader in face grinding of transmission gears. We continue to manufacture the most robust machine in the market with an easy to use interface and overall design. This certainly helps the process," Tarara added.

The particular end customer that received this manufacturing cell has been extremely excited about the direction C&B has taken its machines regarding robotics and automation. One of C&B's largest customers is extremely eager to startup five identical



C & B's integration of robotics and automation has improved the precision, accuracy and quality of various components (photo courtesy of C & B Machinery).

manufacturing cells in Sharonville, Ohio. This plays an added role in C&B's drive to keep manufacturing strong in the Midwest and the United States.

Keeping an Eye on Automation

Tarara believes the company will continue to do research and development and monitor the latest trends in automation design.

"In a matter of just a few years, our cells have changed dramatically, so we can provide our customers the best end product that is continually improved. We will continue to make improvements and invest in R&D to ensure that C&B Machinery continues to be a global leader in the high production and precision grinding machine market," he said.

The plan for the future is to continue to be a market leader in the face grinding of gears. C&B would also like to enhance its vertical (clamp bore) microfinishing grinding machines to serve a broader customer base. Tarara notes that the company offers many different configurations to meet various customer requirements for this equipment.

With the potential slowdown in new transmission gear manufacturing programs, C&B hopes to continue to grow in different market sectors like

hand tools, aerospace, heavy equipment, knife, connecting rods and bearings industries to name a few.

Overall, they are extremely optimistic heading into 2018.

"We have just road the wave of 8-speed, 9-speed & 10-speed transmission programs with many large automotive manufacturers. You could say we're currently 'cautious' in the automotive sector, but very optimistic in all others as we have seen these markets work in tandem with each other. When one is

down, we see an uptick in the others which keeps things well balanced for C&B Machinery. Since C&B Machinery is a dynamic company we can meet the demands and requirements of many different markets and customers." 

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