Hardinge Selects Mitsubishi Electric Control System for CHNC Turning Centers to Provide Customers with High Performance, Lower Cost Alternative

Case Study

Solution
- M70V CNC system
- MDS-DM multi-hybrid amplifier

Hardinge Product Benefits
- 10 percent in savings to Hardinge customers
- Compatibility with existing systems

Mitsubishi Electric Value-added Advantages
- Complete control system, with no upgrades to purchase
- 64-bit processor
- Easy-to-use HMI

“Hardinge was seeking a state-of-the-art control system compatible with existing systems -- one that was loaded with features and capable of super precision performance -- all at a lower cost to its customers. Hardinge was very specific in its criteria. “The new control system had to be reliable and top quality,” said Andy McNamara, Director of Sales and Marketing North America, Hardinge Inc. “It also had to be a complete system with a high performance servo and spindle system. However, most importantly, it had to give us SUPER-PRECISION® capability for our product, because that is what differentiates us.”

Because the company’s machine systems are known for their precision, Hardinge required that the new control system meet the following precision benchmarks: 1) pass strict guidelines for accuracy and repeatability, 2) provide .0001mm control, 3) longevity in cutting metal parts with precision and 4) achieve strict profile tolerances.

Back Matter Instructions:
1. For high-resolution images, please email us at hardinge@hardinge.com
2. All images are to be used as PDFs.
3. Copyrights must be cleared with the appropriate company.

CS-VH-00119
F72-155-SLSMKTG-002-C
Hardinge Selects Mitsubishi Electric Control System for CHNC Turning Centers to Provide Customers with High Performance, Lower Cost Alternative — Case Study

The system would also have to be as fast as or faster than other control offerings, provide full G-code compatibility with legacy machines, and pass ease-of-use standards set forth by Hardinge application engineers. Moreover, it had to be a well-packaged, feature rich system. “Our customers are value conscious, so we wanted a control system with everything in it, not one with a la carte features,” stated McNamara.

SOLUTION
Mitsubishi Electric met the initial criteria for a well-known CNC vendor. “Mitsubishi Electric is a well-positioned, well-accepted brand,” commented McNamara, so he was confident that his customers would trust the company’s reputation for quality and reliability. However, beyond its brand name, McNamara said that Hardinge was also impressed with Mitsubishi Electric’s sales support and service.

Hardinge approached Mitsubishi Electric Automation with its requirements for a control system. After being selected as a control system vendor for Hardinge CHNC machines, Mitsubishi Electric identified its M70V CNC system with an MDSDM multi-hybrid amplifier as offering similar performance to the existing control system in the Hardinge machines. Mitsubishi Electric then put together a commercial and technical team for build and modifications.

Having launched its newest CHNC machines with the Mitsubishi Electric M70V CNC system, Hardinge now provides customers with a choice of two control system options in its Quest Series CHNC 27 and CHNC 42 turning centers.

RESULTS
Hardinge chose the Mitsubishi Electric M70V, in part, because it provides program resolution and tool offset adjustment of .0001mm or .000010” which is a requirement for SUPER PRECISION® turning. In addition, the Mitsubishi Electric M70V will save Hardinge customers 10 percent or more when they choose it as their control system in a CHNC 27 or CHNC 42 turning center.

The ease-of-use criteria were also exceeded by the M70V control system, impressing the Hardinge application engineers who said that the operating panel is easy to navigate, with fewer keystrokes and fewer, yet better organized screens than many other controls on the market. These features facilitate shorter setup and cycle times, and shorten learning curves. The engineers also like the list feature that allows them to find any screen with just one stroke. Other popular features of the M70V among the Hardinge application engineers are the full keyboard, improved operator panel, excellent documentation, program tree function and interchangeability with existing programs. The M70V also offers multiple connectivity options for easy integrations.

“The Mitsubishi Electric M70V is leading edge from a technology standpoint, and competitive with respect to performance and value that it offers our customers. With a loaded feature set and no options to purchase, Hardinge can offer a fully packaged, state-of-the-art control system to our customers at more competitive pricing than in the past,” concluded McNamara.