# **Star Cutter Unveils Advanced FLX Machine with NUM FlexiumPro CNC Control System, Enhancing Automation and Productivity for High-Volume Tool Manufacturers**

## Leading the Way in Cutting-Edge Manufacturing Solutions

**09.09.2024 – [Teufen, CH]** – Star Cutter Company, a global leader in cutting tool technology, proudly announces the launch of its revolutionary FLX machine, powered by NUM’s advanced FlexiumPro CNC control system in combination with the proven NUMROTO software to easily program all kind of different tools. This significant advancement underscores Star Cutter’s commitment to delivering cutting-edge solutions for high-volume tool manufacturers, providing an enhanced platform for automated, high-precision manufacturing.

**A Ground-Up Redesign and Technological Leap**

The decision to transition to NUM’s FlexiumPro CNC control system was driven by Star Cutter's dedication to innovation and operational efficiency. The FLX machine represents a complete redesign from previous models, making this the ideal moment to adopt NUM’s latest FlexiumPro CNC system along with NUM DrivePro servo amplifiers.

Leveraging the strengths of previous Star machines, the FLX was a ground-up machine re-design," said Brad Cooper, Plant Manager from Star Cutter. "It was the right time to migrate to NUM's FlexiumPro system, ensuring seamless software transitions and significant improvements in automation, power consumption, and data security."

**Key Features of the NUM FlexiumPro CNC System**

One of the standout features of the new FlexiumPro system is its seamless integration with existing technologies. Star Cutter re-used much of the logic and custom programming developed for earlier generations of NUM systems, significantly reducing engineering effort during the transition.

Among the FlexiumPro’s innovations is a modernized EtherCAT communication interface that reduces power consumption and shrinks the electrical panel footprint. The system’s cutting-edge single-cable motors allow for easier maintenance, while its system-on-chip (SoC) technology has increased CNC computing power by tenfold. The FLX machine’s B and C axes are driven by NUM’s TMX series hollow shaft torque motors, ideal for tool grinding applications, which demand very smooth and accurate rotation, especially at low speeds.

"The system architecture also supports NUM’s high-performance single-cable motors, making maintenance easier and allowing us to take full advantage of modern connection systems," Star Cutter’s Brad Cooper added. "The maintenance of this machine type has never been easier, and the performance enhancements ensure it is ready for lights-out manufacturing."

**Performance and Efficiency Gains**

The FLX machine is designed with automation and wheel change enhancements, making it ideal for high-volume toolmaking customers. One of the most notable improvements is a 30 % reduction in wheel change time, thanks to a redesigned wheel magazine area and increased system processing power.

Star Cutter has also integrated robotics to handle both wheel and tool changes, offering up to 15 wheel pack locations and 1200 tools, which significantly extends automated production runs. This makes the FLX a game-changer for catalog-standard carbide tooling manufacturers.

In terms of efficiency, the FlexiumPro system's built-in IIoT (Industrial Internet of Things) connections facilitate seamless transmission of production statistics to plant analytics systems. The inclusion of super-capacitors in the system’s Real Time Kernel ensures safe shutdowns during power failures, further enhancing the reliability needed for lights-out manufacturing.

**A Competitive Edge in a Demanding Market**

The introduction of the FLX machine with the FlexiumPro CNC system plus the NUMROTO software for generating the grinding programs, positions Star Cutter at the forefront of the cutting tool manufacturing industry. The combination of innovative automation, enhanced reliability, and state-of-the-art technology offers a distinct competitive edge.

"As the tool-making industry continues to evolve toward lights-out production, the reliability and advanced capabilities of this system will play a crucial role in maintaining productivity and efficiency," said Aaron Remsing, Jr., Sales Manager from Star Cutter. "The NUM FlexiumPro system, combined with the robust FLX platform, enables us to meet the high production demands of our customers like never before."

**Looking Ahead**

Star Cutter remains focused on advancing its FLX, NXT, and PTG platforms to serve a broader range of industries. Future enhancements will continue to align with customer needs, particularly in the high-production and medical sectors. As part of its commitment to customer service, Star Cutter will ensure a smooth transition for clients adopting the new CNC system, providing comprehensive support and training to ensure optimal performance.

"Our customer service and support will remain our top priority," affirmed Aaron Remsing, Jr. "We are dedicated to making the transition to the new CNC system seamless for our customers, ensuring they continue to receive the high level of service they have come to expect from Star Cutter."

**About Star Cutter Company**

Headquartered in Farmington Hills, MI, and originally founded in 1927, the Star Cutter Company is a global leader in the cutting tool industry with over 700 employees working in 15 manufacturing facilities. Each facility specializes in producing a specific type of product or service: carbide blanks and preforms, solid carbide cutting tools, gundrills, PCD tooling, gear cutting tools, and 5-axis CNC tool and cutter grinding machines.For more information on the FLX machine and the NUM FlexiumPro CNC control system, please visit num.com or contact:

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Star Cutter’s newest generation tool grinder – the FLX

