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***For immediate release***

### **ECG Slot Grinding of Castle Nuts Eliminates Need for Secondary Operations**

Ramsey, New Jersey -- Using [Electrochemical Grinding \(ECG\)](#) to form the slots on Castellated Nuts can generate as much as a 70% savings in productivity by eliminating the need for secondary operations.

Castle Nuts, also referred to as Castellated Nuts, are used for applications in aerospace and automotive markets where the nut cannot loosen. A cotter pin or safety wire is inserted through a cross-drilled bolt extending through the opposing slots to mechanically prevent the nut from loosening. Without the Castle Nut, the nut would separate from its shaft potentially leading to catastrophic results.

The slotting operation requires three cuts per part, cutting two slots per pass. Slitting Saws, Abrasive Grinders, Wire EDM, and Sinker EDM are popular mechanical and abrasive processes used for slotting Castle Nuts. These processes require frequent wheel dressing or saw changing, dramatically reducing productivity and throughput. Current manufacturing processes can distort the slot, damage the slot, or deform the thread. Secondary deburring or re-tapping is often required after slotting. This results in increased scrap rates, increased cycle times, and reduced throughput. The manual loading process also slows production.

Tridex Technology, a Glebar Company, has delivered a process using their [SG series Burr-Free Electrochemical Surface Grinding Machines](#) to form the slots on Castle Nuts while reducing scrap, improving cycle times, and increasing daily throughput.

“ECG provides fast, accurate, and burr-free results with no debris after rinsing, no metallurgical damage, and no distortion,” said Tom Travia, Director of Sales, ECG at Glebar. “The burr-free grind eliminates the need for deburring or other secondary operations, improving productivity and reducing scrap.”

In a recent test, Tridex used their [SG-1645 Burr-Free Electrochemical NC/CNC Grinder](#) to grind 0.165" slots into Castle Nuts. The grind resulted in a cycle time of 8.9 seconds, equating to 339 parts per hour, generating as much as a 70% savings in productivity.

An optional pallet index table allows full production without stopping to load and unload parts. For very high-volume parts, a custom dial index ECG machine can be built with three ECG spindles, so every cycle produces a finished part.

To learn more about ECG and Slot Grinding of Castle Nuts, read the [case study](#) on the Glebar website or send an email to [info@glebar.com](mailto:info@glebar.com).



***The SG-1645 Burr-Free ECG NC/CNC Surface Grinder from Tridex Technology, a Glebar Company.***



***Castle nuts slotted using ECG.***

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About Glebar Company

Glebar Company ([www.glebar.com](http://www.glebar.com)) is an innovative, vertically-integrated, process improvement company that designs and configures its standard platform of modular precision centerless grinding machine systems to provide turnkey, custom solutions for its customers. The company

focuses on delivering a process to its customers while maximizing customer return on investment. Founded in 1952, Glebar serves companies all over the world, across many market segments including medical, industrial, aerospace, automotive, consumer goods, and mining. Its machines are known for their precision, longevity, flexibility, and efficiency.

Glebar machines are made to the highest quality and safety standards. Every machine is backed by a 24/7 customer service operation which includes a team of technicians, design engineers, and customer service representatives. The company also stocks a stand-by inventory of critical parts and tooling for next-day delivery in the U.S., Europe, and Asia. It employs a dedicated applications team conducting research and development activities, customer process enhancement, and pushing the limits of grinding wheel technology. Glebar is an ISO 9001:2015 Certified Company and is ITAR Registered.

In 2020, Glebar Company expanded its capability and is now offering Electrochemical Grinding (ECG) technology, through the acquisition of ECG leaders Tridex Technology and Everite. Glebar now offers innovative turnkey ECG manufacturing solutions designed to improve cycle times, maintain quality levels, and allow operators to easily set up and run multiple machines.

For more information about Glebar, call (201) 337-1500, visit [www.glebar.com](http://www.glebar.com), or send an email to [info@glebar.com](mailto:info@glebar.com).