

# SIEMENS

*Ingenuity for life*



## Achieve new levels of machine tool efficiency and productivity for less cost

**Retrofitting an aging machine with a new CNC can improve its productivity, cut soaring maintenance costs, and greatly extend the machine's lifecycle**

Keeping pace with the constant demand to modernize, improve productivity, reduce costs, and increase quality is a challenge we all have to deal with everyday. Obviously, one solution is to purchase all-new, state-of-the-art CNC machines that best fit your manufacturing needs. This may seem to be an ideal solution until managers get a look at their final, approved capital budget.

Stretching less than enough capital money to gain maximum value at minimum cost is imperative. That's why retrofitting new "state-of-the-art" equipment on existing machines presents an attractive, viable alternative while maximizing value and stretching the overall budget.

After ten or more years of operation, the mechanical components of machine tools are usually still in good condition. But control and drive technology has continued to advance steadily during this time—introducing new functions that make production more precise, more energy-efficient, and more economical.

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Retrofitting is one way to give older machines access to these innovations by replacing old functions with new ones. The challenge lies not only in replacing a technical component, but in exploiting the various capabilities of modern control and drive systems, which offer the user new business opportunities. The main goal is to smoothly integrate the advantages of controller and/or drive upgrades into the existing machine concept so that the user works with a proven machine—one that is now state-of-the-art—without having to purchase a brand-new CNC machine.

Siemens can help you decide what you need. We'll do a machine evaluation to determine the extent of the retrofit package that meets your needs and stays within your budget. A control retrofit package can help you keep pace with future demands at substantially less cost than the purchase of a new machine.

**Modernization means new levels of productivity and shopfloor efficiency**

Each retrofit begins with a complete assessment of your needs, followed by an in-depth consultation. Siemens specialists will examine all of the machine's components: the CNC, drives, motors, measuring systems, switchgear cabinet, and, if necessary, the machine tool's integration into your production network.

Depending upon the machine's technology, functionality and performance requirements, the best possible retrofit solution will be developed. If needed, Siemens can also perform mechanical reconditioning or partial modernization by replacing CNC technology and reusing the machine's existing analog drive system.

We always strive to optimize your machine tool's productivity in line with the range of applications and your company's business goals. You'll have peace-of-mind knowing that the most experienced experts in the industry will bring new life to your CNC machine's iron.

**Customized retrofits for better performance—and an even better CNC machine**

With a machine retrofit from Siemens, customers will benefit from the strengths of an experienced modernization partner. As an alternative to a new machine tool investment, the retrofit solution is adapted to your production process, making it more economical and flexible, while reducing costs. The latest standard products and pre-assembled replacement and hardware packages enable short project planning and commissioning times.

Siemens has the engineering capabilities to integrate cutting-edge components into a system quickly and easily. This approach is based upon a combination of decades of expertise with controllers, drives and motors; machine and plant modernization; as well as industry knowledge and project management. This experience helps customers take full advantage of the productivity and efficiency potential of a machine tool retrofit solution.

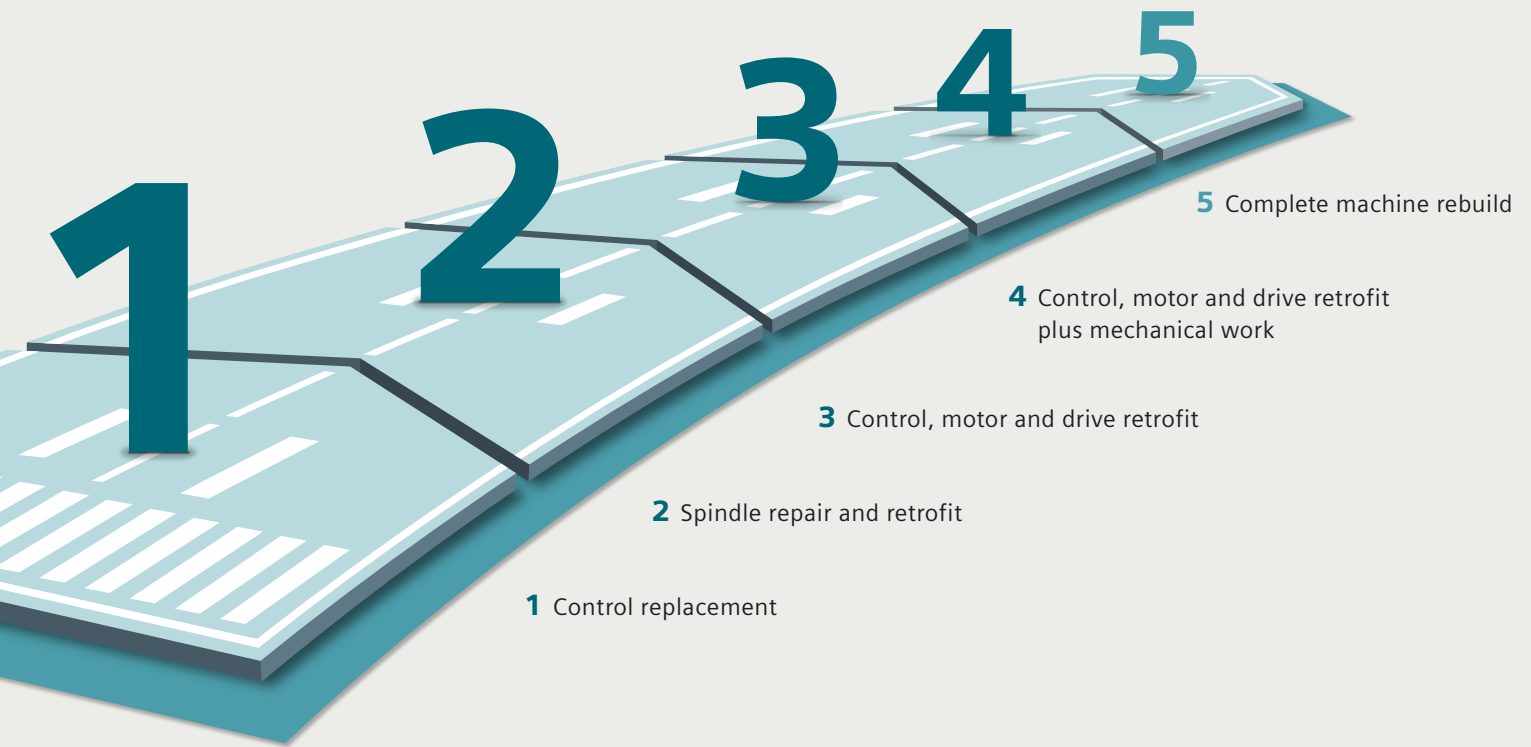


**Before machine retrofit**



**After completion of the machine retrofit with SINUMERIK 828D**

You can depend on Siemens to provide the level of machine tool retrofit assistance you need.



#### Why should you consider a machine tool retrofit with Siemens?

##### You'll benefit from:

- Professional installation by a Siemens-certified machine tool retrofit solution partner
- Improved machine availability with corresponding increases in manufacturing productivity
- Increased energy efficiency of the CNC machine and your shopfloor
- Easier operation and programming
- Faster machining cycles for complex parts
- Increased safety for your people and machines
- Reduced downtimes and mean-time-to-repair (MTTR)
- Reliable and secure data management
- Greater data storage capacity for part programs
- Guaranteed spare parts from a single-source supplier



Get ready for a new level of efficiency and productivity—  
which controller is right for you?

**SINUMERIK 808D** This user-friendly, entry-level CNC is the ideal choice for basic milling and turning machines. Thanks to its panel-based design, the SINUMERIK 808D is small enough for compact machine tools; rugged enough for harsh environmental conditions; and with its graphical user interface, it's extremely intuitive to operate.

**SINUMERIK 828D** As a breakthrough CNC for the shopfloor, the SINUMERIK 828D offers machine-enhancing performance capabilities that are normally reserved for high-end controllers. Tailored precisely for demanding milling, turning and grinding applications, it's available with a horizontal and vertical control panel layout; it comes with a choice of two CNC performance variations; and is small enough to be easily integrated into even the most compact machine designs.

While it's capable of full graphical, high-level command, SINUMERIK 828D also supports ISO programming, which is customary in the United States. This innovative, panel-based control is suitable for single-part, small-batch and large-scale serial production.

**SINUMERIK 840D** This universal and flexible CNC system is a distributed, scalable, open and inter-connecting system that offers a wide range of specialized functions for milling, turning, drilling, waterjet, laser multi-tasking, robotic and handling applications. It features our innovative SINAMICS S120 drive platform, which means up to 93 axes in 30 machining channels can be controlled in the Numerical Control Unit (NCU) link.

The SINUMERIK 840D offers users innovative features that increase productivity on the manufacturing floor—especially in the challenging segments of five-axis and high-speed aerospace, automotive, power generation and medical part manufacturing.

**We're ready to support you every step of the way.**

**For more information, simply send an e-mail to: [cnc.us@siemens.com](mailto:cnc.us@siemens.com)**

Published by  
Siemens Industry, Inc.

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1-800-879-8079

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Order No. MBAR-RETFT-0619  
Printed in USA  
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