



[Docket No. 250924–0161] XRIN 0694-XC138

Section 232 Investigation into Robots and Industrial Machinery

Submitted by: AMT – The Association For Manufacturing Technology

Public Comment: The Case Against Tariffs on Machine Tools and Robotics

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Date: October 15, 2025

Introduction

AMT – The Association For Manufacturing Technology (formerly the National Machine Tool Builders' Association) appreciates the opportunity to comment on the ongoing Section 232 investigation into robots and industrial machinery.

We share the administration's goal of strengthening America's industrial base and securing U.S. supply chains. However, imposing tariffs on imported robots and machine tools would directly undermine these objectives. Such measures would increase costs, disrupt domestic production, and diminish the competitiveness of U.S. manufacturers—jeopardizing both economic resilience and the defense industrial base. The resulting cost pressures and supply disruptions would limit access to advanced manufacturing technologies and, in turn, weaken the nation's capacity to maintain a robust and ready defense infrastructure—contrary to the goals of strengthening supply chains and national security.

About AMT

AMT represents more than 1,000 manufacturing technology providers with locations across the United States, including nearly every domestic machine tool builder. Our members encompass the full spectrum of design, innovation, and production capabilities—from metal cutting and

forming to precision machining, automation, tooling, inspection, and advanced controls. Most are small businesses with fewer than 100 employees, yet together they form the backbone of American manufacturing and defense readiness.

Manufacturing technology is the foundation of industrial capability. Often called the “master tools of industry,” machine tools and automation systems make it possible to produce virtually every manufactured good—from cars, semiconductors, and defense systems to aircraft, jet engines, energy infrastructure, and medical equipment.

They are also the enabling technologies behind nearly every sector under active Section 232 investigation: commercial aircraft and engines, wind turbines, semiconductors, pharmaceuticals, medical devices, drones, and furniture. Every one of these industries depends on the precision, automation, and productivity provided by machine tools and robots.

If the United States intends to strengthen domestic production across these strategic sectors, it must first ensure ready, affordable access to the tools that make them possible. Imposing tariffs on machine tools and robotics would not only disrupt their own supply chains—it would undercut the nation’s ability to expand capacity in all the industries policymakers aim to secure. America doesn’t need to choose between building advanced products and building the machines that make them. We need both, working in concert, with continued access to global innovation and supply networks consistent with longstanding U.S. trade practices and appropriate national security safeguards.

The Changing Industry

From the end of World War II through the mid-1960s, the United States was the world’s largest producer, consumer, and exporter of machine tools. By the 1960s, the U.S. accounted for over one-quarter of global production and exported machinery to nearly every industrialized nation. American machine tool builders such as Cincinnati Milacron, Giddings & Lewis, Monarch, Bridgeport, Hardinge, Gleason, Pratt & Whitney, and Warner & Swasey were recognized as technological leaders.

The U.S. also led the world in developing numerical control (NC) technology—pioneered through Air Force and MIT research in the 1950s—which laid the foundation for modern computer numerical control (CNC) systems. That leadership, however, began to erode by the late 1970s.

In the early 1980s, the U.S. machine tool industry faced a crisis of competitiveness. American builders were losing ground to foreign producers—particularly from Japan and Germany—as those countries introduced more advanced CNC technology, precision engineering, and lean production methods. At the time, U.S. firms struggled with an aging capital base, a shrinking skilled workforce, and declining investment in research and development. Temporary import restrictions and tariffs were intended to give the domestic industry “breathing room” to

modernize and compete globally. They aimed to protect an industry with a deep manufacturing base, substantial domestic production, and capacity to rebuild.

The subsequent recovery of U.S. manufacturing in the late 1980s and 1990s was driven primarily by private investment in automation, workforce training, and technology adoption rather than government intervention. Federal initiatives, such as the U.S. Defense Department's Manufacturing Technology (MANTECH) program, complemented these efforts by providing millions of dollars annually for advanced manufacturing research and development to improve productivity, reduce costs, and enhance national security. Data from the period show that productivity gains and export growth coincided with capital investment and global integration, highlighting the central role of private investment and innovation in the industry's renewal.

Today, the U.S. machine tool and automation sector operates within a highly globalized supply chain. Many companies design and assemble equipment domestically but rely on imported components, controls, spindles, and subassemblies. Competitiveness now depends not only on domestic innovation but also on reliable access to global inputs, making modern U.S. manufacturing fundamentally different from the largely domestic-driven recovery of the 1980s and 1990s.

AMT shares the goal of bringing more high-end manufacturing technology production to the U.S., but imposing new tariffs under these circumstances would not revive domestic production. Instead, it would raise costs for American manufacturers across the industry, disrupt access to critical technologies, and ultimately reduce the competitiveness of U.S. machine tool builders and the companies that rely on them.

Over the past four decades, U.S. machine tool and automation suppliers have shifted from mass production toward high-technology niches, including precision CNC systems, industrial robotics, additive manufacturing, and advanced systems integration. Today, the competitive advantage of these firms lies not in volume production of machine tools but in innovation, the integration of automation and digital systems, and the ability to combine robotics, sensors, and data analytics into advanced manufacturing solutions. Tariffs on imported machine tools or components would directly undercut these strengths, increasing costs and limiting access to critical inputs needed for the U.S. industry to maintain its technological edge.

Tariffs Would Harm, Not Help, U.S. Manufacturing

1. Tariffs raise costs for U.S. manufacturers.

Machine tools and robots are indispensable capital goods for industries such as aerospace, medical, automotive, defense, and energy. Tariffs would make this equipment more expensive, reducing investment, delaying modernization, and eroding U.S. competitiveness. At a time when manufacturers face persistent workforce challenges, higher costs for automation would slow productivity growth and limit their ability to meet rising demand.

2. Domestic builders would be hurt, not protected.

U.S. machine tool and automation producers rely on imported components—precision bearings, drives, electronics, and control systems. Tariffs on these inputs would raise production costs for American-made machines and weaken the very industry they are meant to shield. For smaller domestic builders, increased costs could mean lost sales, fewer investments in innovation, and diminished global market share.

3. Tariffs distort the market and slow innovation.

By raising prices across the board, tariffs penalize both imports and domestic production. Manufacturers may delay equipment upgrades or shift production overseas to access affordable technology, shrinking demand for U.S.-built machines and discouraging investment in next-generation capabilities.

4. Tariffs threaten the defense industrial base.

The manufacturing technology and automation sectors underpin America's defense capability. Every advanced weapon system, aircraft, and naval vessel begins with precision manufacturing tools and automated production processes. Tariffs that disrupt access to these technologies from legitimate global suppliers—excluding sanctioned or embargoed countries—would jeopardize readiness, delay innovation, and reduce the cost-efficiency of defense programs. Maintaining our military's technological edge requires continuous access to the most advanced manufacturing tools in international commerce.

A Better Path Forward

Instead of imposing new costs, the U.S. should pursue policies that strengthen its technological edge by:

- Incentivizing domestic investment in manufacturing technology production and workforce development
- Supporting R&D in advanced automation and digital manufacturing systems
- Facilitating partnerships between U.S. and allied technology providers to ensure supply chain resilience
- Streamlining regulations and export controls to promote competitiveness and innovation

Conclusion

AMT supports President Trump's efforts to protect national security and strengthen the economy by revitalizing America's manufacturing sector. Enactment of the One Big Beautiful Act was a significant step forward in advancing these goals.

At the same time, AMT is concerned that imposing tariffs on imported robots and machine tools would undermine this progress. Such measures would increase production costs, disrupt domestic manufacturing, and reduce the global competitiveness of U.S.-based firms—jeopardizing both economic resilience and the defense industrial base. By limiting access to advanced manufacturing technologies, tariffs threaten the nation’s ability to maintain a robust and ready defense infrastructure, contrary to the objectives of strengthening supply chains and national security.

Nations that have successfully advanced their manufacturing sectors have done so through workforce investment, technology adoption, and open markets, not through restrictions on access to advanced production equipment. The United States needs policies that ensure manufacturers have access to the best tools and technologies, whether sourced domestically or through trusted partners. Robots and automation are essential to addressing workforce shortages, boosting productivity, sustaining economic growth, and maintaining a strong defense industrial base.

Secure, resilient supply chains and ongoing investment in innovation are essential to a competitive manufacturing sector and national security. AMT urges the administration to reject tariffs on imported machine tools, robotics, and components, and instead adopt policies that reinforce American manufacturing through innovation, investment, and collaboration.

Respectfully submitted,
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October 15, 2025