

AMADA MACHINE TOOLS AMERICA, INC.



THE VISION OF PRECISION

Multi-Function Grinding Centers



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Amada Machine Tools America



With more than 70 years of industry experience, Amada Machine Tools America is committed to helping our customers deliver dependable service and top-quality work with exceptional grinding solutions.

Whether you need profile, forming, surface, or rotary grinding, we have the right solution for your specific needs.

Market-Leading Quality—We believe quality work begins with quality tools designed and built from the ground up to deliver outstanding performance, time after time.

Customer-Driven Innovation—Every feature, function and configuration we offer has been developed to address the needs of our customers.

Proven Accuracy—We help you take your work to the next level and exceed your customers' expectations.

Reliable Productivity—We understand productivity is the heart of your business, and we can help you optimize it in multiple ways.

A History of Cutting-Edge Manufacturing

Since we began building profile grinders back in the 1940s, our goals have always been to provide our customers with increased accuracy and productivity. Throughout our history, we've maintained our time-honored tradition of hand-fitting our grinders to deliver the ultimate in quality and precision.

And, as technology has evolved, we've embraced CNC automation as a core strength, improving throughput and helping new operators become productive more quickly.

Today, we are uniquely positioned to help you expand your capabilities and grow your business.

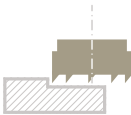
Solutions Designed Around Customer Needs

No two manufacturing needs are exactly alike. Finding the right solution means thoroughly understanding your objectives and configuring a solution to match them precisely. Our engineers bring decades of industry experience to help you achieve your specified goals with a process that fits—and enhances—your workflow.

TECHNOLOGIES OF AMADA



GRINDING



MILLING



SAWING

Amada Grinding Technology



When the tightest tolerances and accurate repeatability matter, Amada is a world leader in optical profile grinding and high-precision surface and profile work. Suppliers to high-tech electronics and semiconductor manufacturers have trusted Amada grinders for years to deliver the flexibility, precision and productivity they need to stay ahead in a rapidly changing industry.

- Integrated measuring technology
- Award-winning innovation
- Maximum accuracy optimized through use of the most modern construction/design
- High speed for increased efficiency
- Integrated automation for higher efficiency
- Automatic swiveling grinding head during the grinding cycle
- External programming software to optimize part production
- Modular construction for versatile and economic specification

Engineered to Perform

Optimum Balance Supports High-Reciprocating Grinding

—As a pioneer in high-reciprocating grinding and processing, we have achieved a superb, dynamic balance between the machine and the grindstone to deliver superior performance with the widest range of work materials.

High-Quality Grinding that Exceeds

Specifications—The accuracy of our grinding and processing work goes beyond simply measuring RZ to deliver mark-less and sharp-edge mirror finishes.

Reliable, High-Rigidity Structure—The form of the machine has been developed by advanced three-dimensional design and finalized through a comprehensive series of demonstration tests to create high-dimensional rigidity.

Consistent Repeatability—Through superior design and meticulous assembly practices, Amada grinders are engineered to account for thermal displacement, ensuring maximum accuracy throughout the working process.

Advanced, Easy-to-Use CNC Software—Every Amada grinder has dedicated software to allow your operators to take full advantage of each machine's capabilities.

From Surface Grinding to Molding to Profile—Amada's exclusive WAPS platform gives you complete control of all forming processes—rough, semi-finish, and finish processing. It also prepares charts for optical profile grinding and data for profile dressing.

Original Measurement Technology on Equipment—Save time and steps while ensuring maximum accuracy with built-in measurement technology.



GRINDING TECHNOLOGY

Multi-Function Grinding Centers

The world-renowned precision that has made Amada Machine Tools a leader in grinder manufacturing is now available in a multifunction grinding center. The new MX 150 combines five-axis milling, turn milling, and grinding functions in one easy-to-use machine. Complete processing—from rough stock to finish surfaces—can be done in a single chucking, and the grinding feature offers super-fine finishing suitable for plastic injection molding and medical applications.

MX-150



MX-150 Multi-Function Grinding Center



Powerful CNC Control



Automatic Tool Changer



OD Taper Grinding

MX-150 Features

Outstanding Functionality

- Capacity to machine a wide variety of workpieces.
- Five-axis motion can be performed with a higher level of accuracy thanks to an independent structure that prevents incremental positioning errors from the pivot point.
- Very high machining accuracy is achieved by a design concept equivalent to that of a grinding machine.
- Positioning accuracy: Linear axis $\pm 1 \mu\text{m}$ or less, rotary axis $\pm 2''$ or less.

Turn Milling

- Workpieces can be machined at high speed by turning both the workpiece and the tool.
- Intermittent cutting provides a cooling effect and consequently improves tool life.

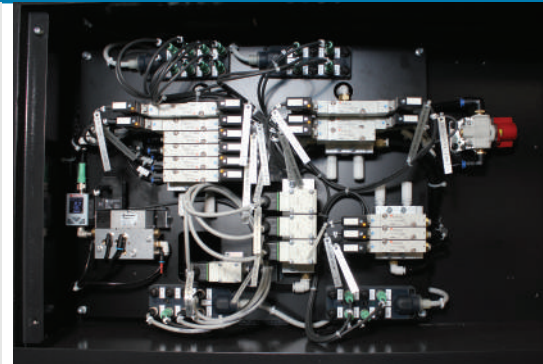
Integrated Grinding Process for Finish Machining

- The machine enclosure and way covers are designed with the grinding function in mind. This improves machine reliability and operator safety by keeping the cutting fluids contained within the machining area.
- Cutting fluid filter system designed exclusively for grinding (optional).
- The magnetic separator and the cyclone filter remove sludge and wheel grit.
- In-machine rotary dresser (optional).
- Grinding using a vitrified grinding wheel is possible.

MX-150 MULTI-FUNCTION GRINDING CENTER



Tool Magazine



High Visibility for Easy Maintenance



Semi-Dry Lubrication System for Milling



Easy Access to Regulators

Additional Features for Maximum Versatility

- Maximum workpiece: 6" x 7.8" (150 mm x 200 mm).
- Powerful 42,000 RPM, 20 HP (15 kW) spindle handles a wide range of tasks, from milling hard-to-machine materials to micromachining with small-diameter tools.
- Sub-micron precision for maintaining the tightest tolerances.
- Full enclosures contain cutting fluids to protect the operator and the equipment.

MX-150 Machine Specifications

CAPACITY	Maximum workpiece size (including jig)	5.906" x 7.874" (150 x 200 mm)
	Maximum weight (including chuck – jig)	22.046 lb (10 kg)
TRAVEL	X axis (right/left)	13.78" (350 mm)
	Y axis (back/forth)	11.811" (300 mm)
	Z axis (up/down)	15.748" (400 mm)
	A axis (work rotation axis)	360°
	B axis (tool rotation axis)	110°
LINEAR AXIS (X/Y/Z AXIS)	Rapid traverse	131.234 ft/min (40 m/min)
	Maximum cutting feed	98.425 ft/min (30 m/min)
	Minimum setting unit	.000004" (0.0001 mm)
WORK ROTATION AXIS (A AXIS)	Rapid traverse	300 rev/min (at rotation control: 1000)
	Maximum cutting feed	250 rev/min
	Minimum setting unit	0.0001°
TOOL ROTATION AXIS (B AXIS)	Rapid traverse	55 rev/min
	Maximum cutting feed	25 rev/min
	Minimum setting unit	0.0001°
MAIN SPINDLE	Maximum rotation speed	42,000 rev/min
	Maximum output	20.115 HP (15 Kw)
	Maximum torque	6 µm
	Lubrication	Oil air lubrication
	Tool interface	HSK-E40
	No. of ATC	20
	Maximum tool diameter	1.969" (50 mm)
	Maximum tool length	5.906" (150 mm)
	Maximum weight	2.205 lb (1 kg)
FLOOR SPACE (W X D X H)		86.614" x 130.315" x 81.102" (2200 x 3310 x 2060 mm)
MACHINE NET WEIGHT		11,024 lb (5000 kg)

See Amada Grinders at Work



The AMTA Technical Center was created to provide a unique environment for visitors to experience the latest manufacturing technology in action. This stunning 40,000-square-foot facility houses the latest Amada technology in each product group. Much more than just an exhibit, every machine, automation accessory, and software program in the facility is fully operational and ready to empower customers to solve their most challenging manufacturing applications.

The information in this catalog is as of August 2013. Specifications and other contents are subject to change without notice.

There may be differences between the specifications described in this catalog and the Amada products actually shipped. Please ask our staff for more detail.

The products in the catalog may be subject to the provisions of foreign exchange and the Foreign Trade Law. When exporting cargo subject to such controls, permission pursuant to regulation is required. Please contact our business representative in advance when exporting products overseas.

When using our products, safety equipment is required depending on the operational task.

For safe and correct operation, ensure thorough reference to the Instruction Manual prior to operation.

The cutting performance data in this catalog may be affected by temperature, the cutting materials, tool materials, and cutting conditions, etc. Please note that such data are not guaranteed.



At **AMADA MACHINE TOOLS AMERICA**, we're committed to your success. More than just a provider of precision metalworking solutions, we're a partner who can help you meet the advanced engineering and manufacturing challenges unique to your industry. Together, we can create the right solution to meet your needs today and empower you to build your business for the future.

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