THE VISION OF PRECISION

Mid-Sized CNC Grinders
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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.

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**TECHNOLOGIES OF AMADA**

- GRINDING
- MILLING
- SAWING
Amada Lineup of Grinders

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

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.
Built to deliver consistent repeatability on larger projects, the Techster Series grinders feature high-rigidity beds with low centers of gravity and tables without overhangs, so you can handle heavy, high-accuracy grinding with ease.
Techster 84 • 104 • 126

Techster Series 84, 104, and 126
Column Type Precision
Surface Grinders
Techster Series COLUMN TYPE PRECISION SURFACE GRINDERS

Techster Series Features

Economy and Ecology
- The Techster 84, 104, and 126 grinders feature ball screw drive tables as standard. This non-hydraulic drive unit reduces noise and environmental burdens, reducing power consumption while delivering high speed and accuracy for reduced grinding times.
- The vertical axis has a linear guide way with 0.000004” (0.1µm) following for the mirror.
- A powerful 20 HP (15 kW) spindle motor delivers outstanding performance. (Optional on Techster 126.)

Original Designed Structure
- The high-precision structure has increased mass for high rigidity.
- A long stroke cross axis on a T-type solid bed structure ensures maximum straightness over the life of the machine.
- A high-rigidity, C-type column reduces overhang on the wheel head.
- Table movement is fully guided by V-V slideways.

Safe and User-Friendly
- PC-type NC touchscreen.
- Interactive programming software.
- Three types of machine coverings.
- Supports all dressing cycles.

Techster Control
- Control FANUC Windows interface.
- Three-axis control, two-axis simultaneous.
- Meister operating system-compatible.
- Supports all canned cycles and G-code programming of Meister series.
- Supports multiple work cycles.
- Supports all dressing cycles.
- Supports creep feed canned cycle.
- Provides high precision mid-power creep feed.
Techster Series COLUMN TYPE PRECISION SURFACE GRINDERS

User-Friendly Interactive Programming Software  On-Board Measuring Touch Probe  CNC Swiveling Rotary Dresser

Wide Range of Optional Features

- Newly developed original software provides more efficient grinding.
- A quick and accurate on-board measuring device ensures the tightest tolerances are met.
- An automatic wheel balancer is available for Techster 104 and 126 grinders. This measuring instrument adjusts the balance of the wheel and spindle as an integral unit—perfect balancing improves the ground surface roughness.
- Each available dresser has an automatic dressing cycle program:
  - CNC swivel rotary dresser
  - High-speed rotary dresser
  - Single diamond profile dresser
  - Straight dresser
The Techster 126 in Action
The Techster Series’ combination of environmental efficiency and grinding accuracy makes mid-sized jobs easy.

Machine Component

Crowning Grinding (Concave Curving)

Crowning Grinding (Slant and Straight)

Programmable Measuring and Auto Re-Grinding

Mirror Finishing Example

**GRINDING ACCURACY**

<table>
<thead>
<tr>
<th>Operation</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 pieces surface grinding</td>
<td>Parallelism 2.0 µm</td>
</tr>
<tr>
<td>Longest work surface grinding</td>
<td>Straightness 3.0 µm</td>
</tr>
<tr>
<td>Face grinding</td>
<td>Straightness 3.0 µm</td>
</tr>
</tbody>
</table>
## Machine Specifications

<table>
<thead>
<tr>
<th></th>
<th>TECHSTER 84</th>
<th>TECHSTER 104</th>
<th>TECHSTER 126</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CAPACITY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. longitudinal travel</td>
<td>39.3” (1000 mm)</td>
<td>47.2” (1200 mm)</td>
<td>59” (1500 mm)</td>
</tr>
<tr>
<td>Max. cross travel</td>
<td>17.7” (450 mm)</td>
<td>18.1” (460 mm)</td>
<td>25.9” (660 mm)</td>
</tr>
<tr>
<td>Max. spindle center height from table</td>
<td>19.6” (500 mm)</td>
<td>29.5” (750 mm)</td>
<td>33.4” (850 mm)</td>
</tr>
<tr>
<td>Standard chuck size (L x W x H)</td>
<td>31.4” x 15.7” x 3.9” (800 x 400 x 100 mm)</td>
<td>39.4” x 15.7” x 3.9” (1000 x 400 x 100 mm)</td>
<td>47.2” x 23.6” x 3.9” (1200 x 600 x 100 mm)</td>
</tr>
<tr>
<td><strong>TRAVEL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Longitudinal feed</td>
<td>10-131 ft/min (3-40 m/min.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traverse guide way/drive</td>
<td>V-V sliding guide way/ball screw direct drive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. no. of reciprocation (15 mm stroke)</td>
<td>120 min⁻¹</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CROSS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rapid cross feed (jog)</td>
<td>0-15, 19, 78, 196 ft/min (0-400, 500, 2000, 5000 m/min.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handle feed Per rev.</td>
<td>0.0004”, 0.004”, 0.04”, 0.4” (0.01, 0.1, 1.0, 10.0 mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum input increment</td>
<td>0.000001” (0.0001 mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position detection system</td>
<td>Linear scale/deviation: 0.05 μm (OP)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross guide way/drive</td>
<td>Linear roller guide way/ball screw direct drive</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WHEEL HEAD</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rapid wheel head feed (jog)</td>
<td>3.9, 787/min (100, 2000 mm/min)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handle feed Per rev.</td>
<td>0.0004”, 0.004”, 0.04”, 0.157” (0.01, 0.1, 1.0, 4.0 mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum input increment</td>
<td>0.000010” (0.0001 mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position detection system</td>
<td>Linear scale/deviation: 0.05 μm (OP)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WHEEL SPINDLE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size (OD x width x bore) Ø14 x 1.5-2” x Ø5” (Ø355 x 38-50 x Ø127 mm)</td>
<td>Ø14 x 1.5-2” x Ø5” (Ø355 x 38-50 x Ø127 mm)</td>
<td>Ø20 x 38-50 x Ø5” (Ø510 x 38-50 x Ø127 mm)</td>
<td></td>
</tr>
<tr>
<td>Wheel spindle speed</td>
<td>300-2500 min⁻¹</td>
<td>300-2500 min⁻¹</td>
<td>300-1500 min⁻¹</td>
</tr>
<tr>
<td>Motor requirement 10HP-4P (7.5-4 kW) (3850 x 3330 x 2495 mm)</td>
<td>10HP-4P (7.5-4 kW) (11-4 kW) (option)</td>
<td>15HP-6P (11-6 kW) (option)</td>
<td>15-6 kW (option)</td>
</tr>
<tr>
<td><strong>NC CONTROL AXIS</strong></td>
<td>Simultaneous 2 axis + Table 1 axis</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FLOOR SPACE (W X L X H)</strong></td>
<td>133” x 102” x 81” (3380 x 2615 x 2075 mm)</td>
<td>151” x 131” x98” (3850 x 3330 x 2495 mm)</td>
<td>179” x 142” x 109” (4550 x 3630 x 2780 mm)</td>
</tr>
<tr>
<td><strong>MACHINE NET WEIGHT</strong></td>
<td>11,000 lb (5000 kg)</td>
<td>16,500 lb (7500 kg)</td>
<td>27,500 lb (12,500 kg)</td>
</tr>
</tbody>
</table>

*The table speed depends on work load on the table.

## Dimensions

<table>
<thead>
<tr>
<th></th>
<th>TECHSTER 84</th>
<th>TECHSTER 104</th>
<th>TECHSTER 126</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WIDTH</strong></td>
<td>133” (3380 mm)</td>
<td>151” (3850 mm)</td>
<td>179” (4550 mm)</td>
</tr>
<tr>
<td><strong>DEPTH</strong></td>
<td>102” (2615 mm)</td>
<td>131” (3330 mm)</td>
<td>142” (3630 mm)</td>
</tr>
<tr>
<td><strong>HEIGHT</strong></td>
<td>81” (2075 mm)</td>
<td>98” (2495 mm)</td>
<td>109” (2780 mm)</td>
</tr>
<tr>
<td><strong>OPENING</strong></td>
<td>61” (1555 mm)</td>
<td>83” (2115 mm)</td>
<td></td>
</tr>
<tr>
<td><strong>TO TOP OF COVER</strong></td>
<td>86” (2190 mm)</td>
<td>86” (2190 mm)</td>
<td>98” (2490 mm)</td>
</tr>
<tr>
<td><strong>REQUIRED FLOOR PLAN</strong></td>
<td>29ft² (9 m²)</td>
<td>39ft² (12 m²)</td>
<td>52ft² (16 m²)</td>
</tr>
</tbody>
</table>
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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