



**INDUSTRIAL  
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# Spec Sheet

## 20214-IS & 20215-IS MAKINO T1 5 AXIS HMC (2 machines available)

 [industrialmachinetools.com/product/20214-is-20215-is-makino-t1-5-axis-hmc-2-machines-available/](http://industrialmachinetools.com/product/20214-is-20215-is-makino-t1-5-axis-hmc-2-machines-available/)

Categories: Featured Machines, Machining Centers, Horizontal, CNC

### Description

**Product:** MAKINO T1 5 AXIS HMC

**Model:** T1

**Stock #:** 20214-IS

**Serial No.:** 35

**Year:** Installed June 2017

### Specifications:

Pallet Size	39.4" x 39.4", 1,000 mm x 1,000 mm
Maximum Part Capacity	59" Dia x 59", 1,500 mm Dia x 1,500 mm
Number of Pallets	2
X Axis (Head Cross Travel)	59.1", 1,500 mm
Y Axis (Head Vertical Travel)	51.2", 1,300 mm
Z Axis (Pallet Longitudinal Travel)	78.7", 2,000 mm
A Axis Travel	155 deg. (-110°, +45°)
B Axis Travel	360 deg.
Spindle Speeds	to 12,000 RPM
Spindle Taper	HSK-A100
Spindle Motor	76 HP / 56 KW Cont 143 HP / 107 KW 10% ED

Spindle Torque	387 lb-ft / 525 Nm Cont 739 lb-ft / 1002 Nm 10% ED
Feed / Rapid Rates	to 984.3 IPM, 25,000 mm / min

### **Equipped With:**

Makino Professional 5 CNC Control

137 Tool ATC

Through Spindle Coolant (1,000 PSI, 26 GPM)

Nozzle Coolant (217 PSI, 13 GPM)

### **OVERVIEW:**

The T1 shares much of the TI ADVANTIGE™ technologies that were introduced with the larger purpose-built T2 and T4 machines.

- Robust box-way castings establish a foundation of rigidity and dynamic stiffness.
- Active damping eliminates cutting vibrations at the source, increasing metal-removal rates and tool life.
- High-volume, high-pressure through-spindle coolant improves tool life by eliminating heat and evacuating chips from the cutting zone.

Complementing these technologies is T1's unique kinematic structure. Its 155-degree tilting A-axis and deep chest column provide full five-sided machining capability for parts up to 1,500 mm in diameter.

The key to the T1's flexibility is its 12,000-rpm spindle. The T1 tackles titanium with 1,000 Nm of duty-rated torque from spindle start to 1,000 rpm. Aluminum structural components are at home on the T1 with continuous power output of 76 hp out through 12,000 RPM. While titanium and aluminum highlight the extreme boundaries of the T1 spindle capability, mid-range power and torque levels are well suited for materials ranging from stainless steel to Inconel®.