



TOOLMASTER 6000 CNC - 5-AXIS TOOL GRINDER

Standard Equipment:

Linear Axes -X, Y and Z Axes

Preloaded linear profile guides.	
AC Servo motors by Indramant	
Precision rolled ball screws.	
Smallest increments	0.00004"
Accelerated feed rate	1000"/25m min.
X Axis Longitudinal	7"
Y Axis Transverse	20"
Z Axis Vertical	7"

Rotary Axes - A and B Axes

AC Servo motors by Indramant	
Smallest increments	0.0001°
A Axis - Work head, backlash free worm gear transmission	40 RPM
C Axis - Rotating table	360°
A Axis rotation	360°
B Axis rotation (optional feature)	160°

Work Head

Double bearing work head with 5C air collet holding system with shank holding range From 1/8" - 1". Air purged to avoid contamination	
Optional ISO 40 taper available	
Center Height	5.9"/ 150 mm

Grinding Wheel Head

Single end spindle with variable speed frequency, direct drive integrated with the CNC Control system.	
Output	10 HP / 7.7 kW
Output optional	20 HP / 15.kW
Spindle speeds - infinitely variable	0 - 9000 RPM
Spindle size	HSK 50
Grinding wheel maximum diameters	7"
Grinding wheels per mount	1 - 4
Grinding wheel bore diameter	1-1/4"



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Work Piece Capacity

Standard tool grinding setup:

Maximum tool diameter	4.33"/110 mm
Maximum length	9.84"/250 mm
Maximum length when grinding in on chucking	8.6"/220 mm
Helix angles	90° R.H. & 45° L.H.
Grinding from solid in one pass, max. diameter	1"/ 25 mm

Customized grinding setup:

With the ability to move 2 additional axes manually the grinding envelope is enlarged considerably. Depending on its setup, the machine could be used as a Plunge-, OD-, Surface- or Universal Grinder, and Y-axis travel up to 20" is possible.

Enclosure

- Large circular access doors provide 253° of open access to all components in the staging area
- Integrated coolant system
- Integrated mist collector
- Integrated electrical cabinet

Coolant system

- Equipped with a 7 stage pump
- Capacity 110 gallons
- Coolant pump 130 psi / 40 gpm
- Optional interface provided for external or central coolant unit hook up

Mist collector system

- Equipped with a Torin 3 stage system for oil mist and smoke

Electrical Cabinet / CNC control

- Built into main machine enclosure
- Electrical Standards for Industrial Machinery.
- Built-in Vortex cooling system constant temperature.
- Feed rate override potentiometer 0% to 120%.

- LCD color monitor, 17", high resolution
- Full Qwerty industrial keyboard (IP65)
- RS-232 Serial port interface.



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Ethernet Network Interface, PC, Hard Drive

Programmable Multi-Axis Controller
Processor
Interpolation
Programmable Logic Control

Sieb & Meyer PC Control
32 bit
5-axis simultaneous, linear & circular
built-in

Electric's

Customer specified incoming voltage
Control voltage

220/480V AC 3 Phase 50/60 Hz
24V

Software CNC

Error code diagnostics.
Programming of different tools during grinding cycle.
Complete editing capabilities.
All machine movements displayed on the LCD.

Select off-line programming software to regrind and produce cutting tools in one chucking.

Tool Grinding Application Software

Menu driven tool grinding program for complete regrinding and manufacturing of cylindrical and tapered ball and square end mills
Menu driven drill and step drill grinding program for regrinding and manufacturing of standard drill points including up to 5-step step drills.

Renishaw Probe

Tool measuring probe 3D for measuring the end, O.D., helix, tooth position fast and accurate

General

Staging area enclosure fitted with round transparent sliding front doors (Patent)
Water tight neon lighting fixtures for the illumination of the work area
Pressurized auto-lubrication system for X,Y,Z tables, computer interfaced
Standard color for machine and electrical cabinet – white. Optional blue, black, gray
Granite base 900 lbs. mounted on top of a 1" precision ground 52" ϕ plate
Documentation: Electric diagram, Parts list
Weight approx. 6400 lbs. (without coolant)
Floor space requirements: 6' x 9.5' x 7' high



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Delivery

FOB R.T Industries, Santa Ana, California USA
8 weeks from date of purchase order

Warranty

1 years single-shift (8 hrs/day), oil coolant operated

Training

One (1) week included at RT Industries in Santa Ana, California
100 hrs remote training via internet included

Terms

50% down with order, 50% prior shipment

Standard Equipment Pricing

RT6000 Toolmaster 6000 CNC complete and ready to mount wheels **US \$ 209,500.00**
Standard End Mill 1.1 / Drill 6.1 Software ([included in base machine](#))
For more Software options see [Tool Kit Modules Specifications](#)

Optional Equipment

2010	Increase spindle power to 20 HP / 15 kW	12,500.00
2011	Work head ISO 40 taper (additional)	1,800.00
2050	Renishaw 3D measuring probe (included in base machine)	5,000.00
2070	Grinding wheel adapter & mount, each (included in base machine, one piece)	390.00
2081	Integrated Centrifuge Filter System	9,500.00
2082	Fire suppression system	1,600.00
2090	Robotic Loader, Yamaha YK540-I, including controller, pendent, 2 pallets (324 1/8" or 1/4" tools each), 2 sets of grippers	48,500.00

Warranty void after 90 days if Water is used for coolant.

Additional Training for Maintenance & Repair at RT Industries is recommended for overseas shipments

All prices and technical specifications subject to change without notice