



World standard

From carbide to diamonds

CNC TOOL GRINDING MACHINES

**RTG3700**

SERIES

**KANEHIRA**

# World standard - - - from carbide to diamonds

The RTG3700 is the world's highest-level grinding machine in the 21st century. It was developed from our long years of expertise and technological know how from dealing in PCD grinding machines by Kanehira. They are a leading grinding machine manufacturer with over 20 years experience in the manufacture of PCD tool grinding machines.

The RTG3700 design is based on our cumulative experience and expertise in the field, and it offers high rigidity and extremely high accuracy while being very efficient. The RTG3700 offers the ultimate level of physical processing through automatic machining that uses our proprietary algorithm.

## Feature

### POINT 1

#### ***Machine mounted laser measurement (optional)***

The Blum laser system measures the configuration of the workpiece on the machine, completely automatically. The results of the measurements are used to prepare for the next machining session, to reduce the time needed for highly accurate machining. Setup time is also substantially reduced.



### POINT 3

#### ***Machine mounted dresser***

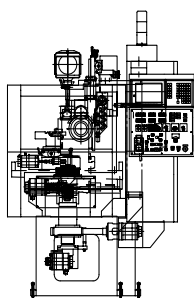
The high-performance dresser mounted on the machine continuously keeps the diamond wheel aligned and flat, for the best accuracy. This provides high accuracy, great uniformity, and high efficiency to your machining operations. Programming for constant compensation will get the most out of the NC.



### POINT 5

#### ***Space savina***

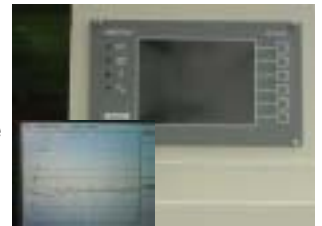
The entire machine is enclosed snugly in a housing that uses only a very small floor space for installation (1550 mm x 1742 mm). There are no unnecessary projections of doors or servomotors. The operation panel is carefully designed and organized for easy operation.



### POINT 2

#### ***AE sensor system (optional)***

The AE ultrasonic sensor incorporated in the main spindle alerts the operator to any micro-vibration which might occur in the main spindle during operation. The alert is shown in real time on the monitor. It can also be used for checking the resistance while grinding, for sensing contact, and other purposes.



### POINT 4

#### ***High-rigidity head***

A number of thick ribs are used for the machine, after careful consideration of the distribution of mass on the superstructure. This provides the rigidity required of a PCD tool grinding machine, as well as the ability to absorb vibration.



### POINT 6

#### ***User macro***

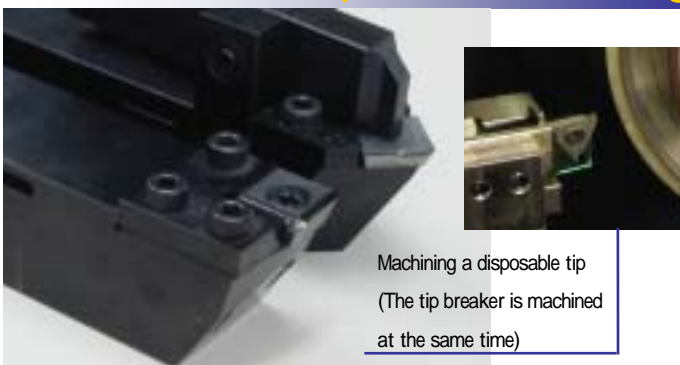
A great many user macro programs (some macros are optional) are possible, for easy and efficient operation. The machine comes with some macros already installed. Even operators who are not familiar with NC machines can easily program a macro. We also stand ready to make customized macros, according to a customer's machining needs.





The front door has been left open for the picture.  
The door should be closed when using the machine.

## Example of machining

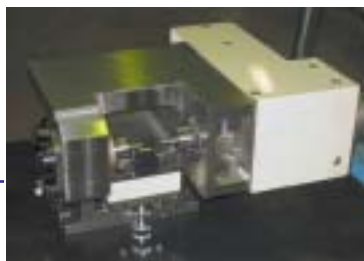


Machining a disposable tip  
(The tip breaker is machined  
at the same time)

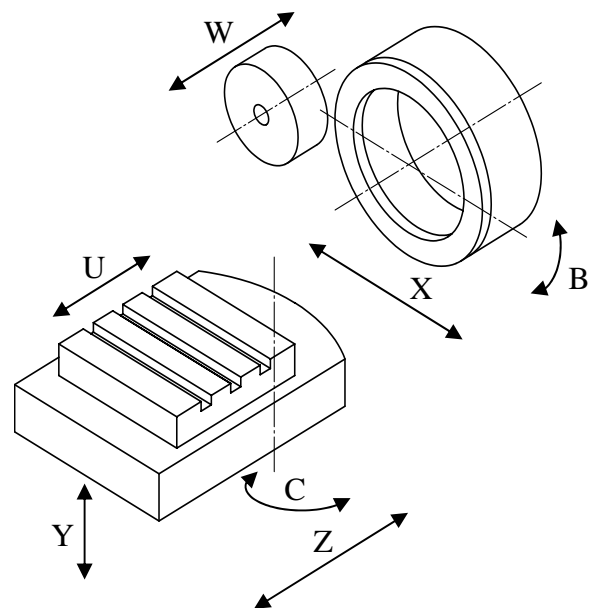


NC cylindrical grinding:  
Machining a small-diameter grinding  
wheel using an index device

Button-tip periphery grinding machine



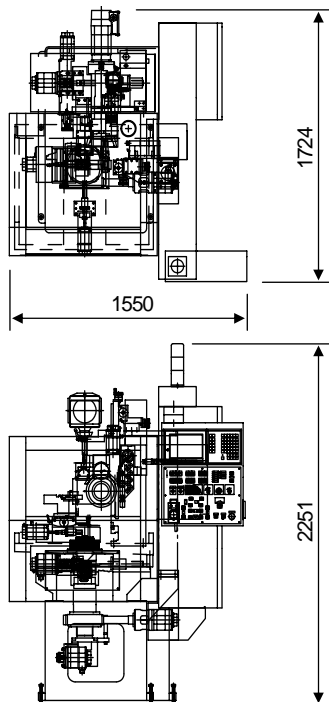
## Axis composition



# Standard specifications

		RTG3500	RTG3600	RTG3700
Controls	CNC axes	5axes(X,Y,Z,C,B)	6axes(X,Y,Z,C,B,U)	7axes(X,Y,Z,C,B,U,W)
	Operation panel	Equipped with LCD(9.5inch)		
	Manual pulse generator	1set		
	Operation Unit	FANUC 18i-MB		FANUC 16i-MB
Wheel spindle	Spindle motor	NC spindle motor		
	Motor output	1.5 kW		
	Wheel spindle speed	4000 rpm		
	Swivel angle	NC servomotor (B axis)		
	Tilting angle	0° ~ 30°		
	Wheel shape	Taper cup type 200 x T65 x H60		
Wheel spindle stock	Wheel spindle stock travel	NC servomotor (X axis)		
	Oscillation stroke	260 mm		
Work table	Cross table horizontal travel Right and left	Manual		
		40 mm		
	Cross table horizontal travel Back and forth	Manual	NC servomotor (U axis)	
		40 mm		
	Work table swivel	NC servomotor (C axis)		
	Work table swivel angle	-95° ~ 0° ~ +95°		
	Infeed table travel Back and forth	NC servomotor (Z axis)		
		115 mm		
Cross table vertical travel	NC servomotor(Y axis)			
	70 mm			
Onboard dresser	Back and forth travel	AC motor	NC servomotor (W axis)	
	Control function	Continuous/intermittent selectable		
	Wheel for use	Cup type, 100mm		
Machine weight	2800 kg			

## View



## Options

Projector × 20, with incident light with special concentric circle screen	A	Projector screen	150 mm
	B	Projector screen goniometer type	150 mm min 10'
	C	Projector screen	250 mm
	D	Projector screen goniometer type	250 mm min 10'
Work table (X-table) digital display			
Coolant unit	A	Tank capacity / pump	60 ℓ / 60 W
	B	Tank capacity / pump	60 ℓ / 60 W
		Filter	Simple paper filter
	C	Tank capacity	120 ℓ
		Filter	Micron filter temperature adjustment
Signal tower			
Custom macro soft		Able to customize	
Auto measuring unit for wheel position			
Auto measuring unit for work form		Used laser point gage	
Auto measuring software for work			
Wheel axis acoustic unit		To know touching with a wheel	
Work loading unit			

## Standard attachments

Wheel flange	1 set
Work tools	1 set

## Special attachments

Diamond wheel	Taper cup type	
Wheel flange		
Vice	A	Work clamp side lock type
	B	Quick change type
Three-dimensional vice		
Quick change vice		
Dividing head	max: 42 angle graduation :min.1° 12 division	
Cylindrical grinding attachment	Collet type, W20	
Dividing table for cylindrical grinding attachment	Collet type, W20	
Dividing table for cylindrical grinding attachment NC type		
Cylindrical mini work piece grinding attachment		

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