

Specifications

1. X-axis

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| (1) Drive system | : | AC servomotor driven ball-bearing leadscrew drive |
| (2) Maximum stroke | : | DAD320, DAD360 : 248mm max. |
| (3) Cutting range | : | 96mm areas on both the right- and left-hand sides of spindle center |
| (4) Workpiece width setting range | : | 0 to 6" (0 to 160mm) |
| (5) Cutting speed setting range | : | 0.1 to 300mm/s |
| (6) Maximum traveling speed | : | 300mm/s |

2. Y-axis

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| (1) Drive system | : | Pulse motor driven ball-bearing leadscrew drive |
| (2) Maximum stroke | : | 162mm max. |
| (3) Cutting range | : | 81mm areas on both the front and rear sides of table center |
| (4) Workpiece width setting range | : | 0 to 6" (0 to 160mm) |
| (5) Index setting range | : | DAC350, DAD360 : 0.0001 to 160mm
DAD320 : 0.0002 to 160mm |
| (6) Minimum index step | : | DAC350, DAD360 : 0.1 μ m
DAD320 : 0.2 μ m |
| (7) Index speed | : | DAC350, DAD360 : 10mm/s max.
DAD320 : 30mm/s max. |
| (8) Scale resolution
(DAC350, DAD360) | : | 0.05 μ m |

3. Z-axis

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| (1) Drive system | : | Pulse motor driven ball-bearing leadscrew drive |
| (2) Maximum stroke | : | 40mm |
| (3) Traveling stroke | : | 30mm max. (when 50.6mm OD blade mounted) |
| (4) Minimum step | : | DAC350, DAD360 : 0.1 μ m
DAD320 : 1 μ m |

4. θ -axis (DAD320, DAD360)

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| (1) Drive system | : | Pulse motor driven harmonic drive |
| (2) Maximum rotation angle | : | 200° max. (-10° + 190°) |
| (3) Minimum step | : | 0.00225° |

5. Spindle motor : High-frequency built-in motor air bearing system
- (1) Rotating speed : 3,000 to 40,000min⁻¹ (rpm)
(Normally semi-fixed at 30,000min⁻¹ (rpm))
- (2) Output : 1.5kW at 30,000min⁻¹ (rpm)
6. Microscope section
- (1) Type of microscope : Dual objective microscope
- (2) Magnification : 200× (on the CRT)
- (3) Visibility range X direction : Entire area positioned to the right of 45mm left of table center
- Y direction : 75mm areas on both the front and rear sides of table center
- Z direction : 18mm area above the table upper surface
(stroke : 20mm)
7. Camera/monitor
- (1) Type of camera : CCD camera
- (2) Monitor : 9-in. monitor
8. Accuracy
- (1) Chuck table parallelism : DAD320、DAD360 : 5μm/153mm
(during measurement at 22°C)
- (2) Y-axis index accuracy : Single index : 1μm or less
: Accumulated index
DAD320 : 5μm/160mm or less
DAC350,DAD360 : 1μm/160mm or less
- (3) Z-axis repeat accuracy : DAD320 : 1μm (range)
DAC350、DAD360 : 0.5μm (range)
9. Operation section
- (1) Console display
Employs a 9-inch CRT to display microscope images, cutting data, error messages, and other relevant information.
- (2) Keyboard
The keyboard is used to select various modes, enter data, change the display screen, and perform various other functions. (It consists of function keys, numeric keys, cursor keys, single-function keys, axis movement keys, and auxiliary keys.)

10. Signal Tower

The buzzer ON/OFF and lamp lighting/blinking settings can be programmed as desired.

Colors : Red, yellow, green

Factory setup

Illuminating green The machine is in full-automatic operation, cutting or alignment.
 Illuminating yellow . . . The machine is in the neutral state.
 Blinking red An alarm condition (error or emergency) has occurred.

11. Utilities

(1) Power requirements

Input power requirements : 200VAC \pm 10% or less, 50/60Hz, 3-phase
 (200VAC - 5% + 10% or less, Single-phase)
 Power consumption : 2.5kVA (max.)
 Noise : 2000V maximum when the pulse width is 500ns
 (square wave).
 Grounding : Inter-ground resistance: JIS Class 3, 100 Ω maximum

(2) Air source

Pressure : 0.49MPa-G (5.0kgf/cm²-G)
 Flow rate : 250N ℓ /min
 Dew point : - 15°C (5°F) or lower
 Residual oil content : 0.1PPM Wt/Wt
 Connection port : Rc (PT) 1/4" female

(3) Spindle coolant

Pressure : 0.29MPa-G (3.0kgf/cm²-G)
 Flow rate : DAD320, DAD360 : 1.5 ℓ /min or higher
 DAC350 : 2.0 ℓ /min or higher
 Connection port : Rc (PT) 1/4" female

(4) Wheel coolant

Pressure : 0.29MPa-G (3.0kgf/cm²-G)
 Flow rate : 3.0 ℓ /min or higher
 Connection port : Rc (PT) 1/4" female

(5) Water drainage

Connection port : Duct hose nominal size : 32mm