FEATURES AND SPECIFICATIONS

Features

(1) Blade life has been extended by a considerable margin, thereby reducing running costs to a minimum. The life of the newly developed NBC-Z blades is about twice that of converntional blades and the number of dressings required has been reduced slightly.

(2) Cutting performance is the best of any saw in the world.

(3) The provision of ultra-precise guide surfaces permits the cutting of pieces of up to 6 inches in diameter. Recirculating bearings are employed to support the X-axis, permitting cutting at up to a maximum speed of 300mm/sec.–12″/sec.

(4) Operator can load up to 10 types of programs.
By specifying the program number after such data as the X stroke, X speed, Y index, Z index and θ index have been entered, any program can be used at any time.

(5) Fixed and variable cutting modes are provided.
The A, B, C and D modes are fixed modes, and the D mode is the dressing mode. In the variable mode, the cutting sequence can be freely programmed by the customer using the User Program Code (provisional name).
A PROM memory of 16 K byte maximum capacity may be additionally mounted. The variable mode is an optional function.

(6) Using the optional function mentioned in (5) (variable mode) ○, □ and ⬡ shaped pieces may be cut with the optimum number of strokes.

(7) The chuck table may be automatically rotated to any angle.
The high speed, high resolution stepping motor employed for the θ-axis drive affords smooth and rapid rotation and highly precise positioning.

(8) Alignment may be accomplished with high precision using the bright TV monitor.

(9) Nonvolatile memories are employed to protect data against power cut-offs or power failure.

Specifications

1.	**Wafer size**	Max. 152.4 mm (ϕ50.8 to ϕ152.4)	Max. Dia 6″ (2″ to 6″)
2.	**X-axis (left-right movement of chuck table)**		
1)	Maximum Table Stroke	160 mm	6 5/16″
2)	Cutting Range	20.4 mm to 153 mm in 1 mm increments	1″ to 6″ in ½″ increments
3)	Cutting Feed Speed	0.3 to 300 mm/sec.	0.012″ to 12″/sec.
4)	Return Speed	300 mm/sec.	12″/sec.
3.	**Y-axis (forward-backward movement of spindle)**		
1)	Maximum Spindle Stroke	160 mm	6 5/16 ″
2)	Spindle Index Range	0.002 mm to 99.998 mm	0.0001″ to 4″
3)	Indexing Steps	in 0.002 mm increments	in 0.0001″ increments
4)	Indexing Speed of Spindle	30 mm/sec.	1.18″/sec.
4.	**Z-axis (up-down movement of spindle)**		
1)	Vertical Stroke of Spindle	20 mm	0.7874″
2)	Range of Depth Left Uncut	0.005 mm to 19.995 mm	0.0002″ to 0.7872″
3)	Step of Depth Left Uncut	in 0.005 mm increments	in 0.0002″ increments
4)	Jog adjustment	0.0025 mm increments	0.0001″ increments
5)	Cutting Feed Speed	15 mm/sec.	0.59″/sec.
6)	Return clearance of Spindle	0.7 mm (in Mode A alone)	0.028″
7)	Cutting Mode (FIX)	A, B, C, and D (dressing mode)	
	Cutting Mode (VAR) (optional)	E	
5.	**θ-axis (chuck table rotation)**		
1)	Rotation Range	0 to 360 degree	
2)	Min. Index setting	1 degree	
3)	θ Orientation (Min. Index step)	0.0022° (81″)	
4)	Rotation Speed	3.7 sec/90°	
6.	**Spindle Motor**		
1)	Rotation speed	30,000 r.p.m. (Variable range 10,000 to 40,000 r.p.m.) High frequency air spindle (water-cooled type)	
2)	Output power	1,250 W (at 30,000 r.p.m.)	

7. **Alignment Microscope**		With monitor TV (5″)	
8. **Accuracy**			
1) Chuck table flatness		0.005 mm/152.4 mm	0.0002″/6″
2) Y-axis Index Accuracy			
	Unit Pitch Error	0.003 mm	0.00012″
	Accumulated Pitch Error	0.005 mm/152.4 mm	0.0002″/6″
9. **Utilities**			
1) Power Supply		3 Phase AC 200 V ± 10 % 50/60 Hz	
2) Power Consumption		3.0 kVA	
3) Air Supply	Pressure	4.5 kg/cm^2	65 p.s.i.
	Flow Rate	190 ℓ/min.	6.5 c.f.m.
4) Water Supply	Pressure	2 kg/cm^2	30 p.s.i.
	Flow Rate	4ℓ/min.	1 g.p.m.
	2 Systems;	(Deionized Water used for cutting Tap Water used for spindle)	
5) Dimensions of Machine (W x D x H)		965 x 885 x 450 mm	38″ x 35″ x 17.7″
6) Weight of Machine		Approximately 300 kg (Including Work Table 395 kg—870 lb)	660 lb
7) Coating Color (Standard)		Munsell 2.5Y4/2 Munsell 2.5Y9/2	