3 axes slides CNC Lathe for milling the cams of camera zooms

SANACAM-100

A new member of SANAX series of 3 axes slides CNC lathes Machine designed for milling cams of high quality.

A new concept to select make the system of the machine by selecting necessory units.
A new style CNC lathe-based machine for milling cams, to change
the conventional process of cam making.

■DD motor of metal bearig
Newly developed DD motor with metal bearing is adopted for the
spindle. This has upgraded the roughness the cams surface.

■Various kinds of milling units
Various kinds of milling units are prepared. Those are units for milling outer
cams, inner cams and tapping units, etc.
Combined milling like ″outer cam and inner cam″, ″ outer cam and tap ″
and ″inner cam and tap ″ can be done with one chuck.

■Compact as a lathe-based machine
Excellent in operation, easy chucking and unchucking of workpieces,
saving of floor space.

■Machine standard specifications

Item			Description
Machine capacity	Max. work size	mm	φ100x L150 (Inner cam：L70)
Spindle	Change of speed		max. 500
	Speed		Step-less, S4 digits direct command
	Nose		φ85 flat type
Milling unit spindle	Speed	Outer cam	max.12,000
		Inner cam	max.15,000※Option
Slide	Travel	mm	X axis： 80
			Y axis：170
			Z axis：300
	Rapid traverse	m/min	X axis： 8
			Y axis： 12
			Z axis： 15
	Jog speed	mm/min	0～1,287
Type of slide			Vertical linear turret
Motors	Spindle (C axis)	kw	0.4
	spindle	X axis	2.5
		Y axis	2.5(with brake)
		Z axis	2.7
Power Electricity		KVA	10
Center height		mm	920
Machine height		mm	1,525
Floor space		mm	1,450×1,245
Machine weight		kg	1,630

■Control unit

Item	Description
NC contril unit	FANUC/S 32i-A
Display	7.2 inch L.C.D. (mono-chrome)
Axes controlled	2 axes (X, Z)　　Simultaneous 2 axes
Least input incremental	X axis : 0.001 (dia.) , Z axes : 0.001
Interpolation	X axis : 0.001 (dia.) , Z axes : 0.001
Auxiliary function	M 2 digits
Spindle function	S 3 digits
Tool function	T 2 digits
Tool offset	400 pairs
Part program storage length	512KB (equiv. 1280m)
Rapid traverse override	0～150%
Interface	RS232C and memory card
Others	Spindle direction positioning, Automatic corner override Canned cycle for drilling, Custom macro, Coordinate system rotation,Tool offset memory C Cylindtrical interpolation, Helical interpolation, Cutter compensation・Tool nose radius compensation, Run hour and parts count display Number of registerable programs expansion 1

■Recommendable accessories

・Work light (LED)
・Tool tip coolant device

■Standard accessories

・Splash guard
・Tool box and tool kit

■Inner cam milling unit

■Outer cam milling unit

■Machine options

Outer cam milling unit, Oil mist coolant device,
Auto door open/close device, Door interlock, Drilling unit
2 spindle innner cams milling unit, Tapping unit
Hole and flange for vacuum cleaner

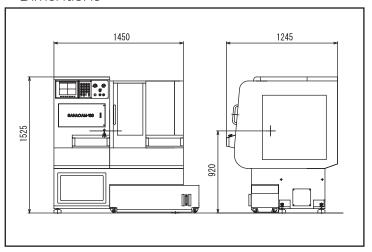## ■Work samples at JIMTOF 2008

Inner cam and outer cam

High quality of the milled surface is essential for the cams of the camera zooms. Cam milling units of SANACAM can realize Ra0.2 and less for both inner and outer cams. Quadrantal objection will obstruct smooth cam action. DD motor and the molybdenum coated bearing are adopted for the spindle, with which high accuracy in the configuration can be obtained.

■Dimentions