

WAIDA

全自動 5 軸 複合インサート研削盤
Fully Automatic 5 Axis Complex Insert Grinder

APX-F50



- New APX model of 5 axis control makes an appearance.
- Supports processing of intricately shaped workpiece that was not possible in the past.
- Achieves high functionality and size reduction.

STANDARD SPECIFICATIONS		
Workpiece	Objects of grinding	Periphery and K land (both sides) on indexable inserts (standard/small size)
	Material	Carbide, Cermet, Ceramics, CBN, PCD
	Minimum circumscribed circle	Equilateral triangle: 3.97 mm Others: 4.76 mm
	Maximum circumscribed circle	45 mm
	Maximum thickness	15 mm
X axis (In-feed)	Maximum travel	-20 ~ +115 mm
	Maximum rapid feed rate	10 m/min
	Motor	AC servo motor
	Feed back scale	Absolute linear scale
Y axis (Oscillation)	Maximum travel	-30 ~ +150 mm
	Maximum rapid feed rate	10 m/min
	Motor	AC servo motor
	Feed back scale	Absolute linear scale
A axis (Vertical turn)	Maximum rapid feed rate	120°S ⁻¹ (20 min ⁻¹)
	Maximum travel	-185 ~ +115°
	Motor	AC servo motor
	Feed back scale	ABS rotary encoder
B axis (Insert rotation)	Maximum rapid feed rate	600°S ⁻¹ (100 min ⁻¹)
	Motor	Direct drive motor
	Feed back scale	ABS rotary encoder
C axis (Swiveling table)	Maximum travel	-96 ~ +15° (A axis 0°) (Some limitations depending on the conditions.) -101 ~ 0° (A axis -180°) (Some limitations depending on the conditions.)
	Maximum rapid feed rate	5,400°/min
	Motor	AC servo motor
	Feed back scale	ABS rotary encoder
Spindle	Grinding wheel size	Outside diameter Φ350 mm
	Spindle rotation speed	500 ~ 2,000 min ⁻¹
	Motor	7.5 kW 3-phase induction motor
Tail stock (with thickness measuring device)	Maximum travel	16 mm
	Maximum chuck pressure	1.2 ~ 8.4 kN (Theoretical value)
Swiveling dressing device (with AE sensor)	Wheel size	Outside diameter Φ125 mm
	Wheel rotation speed	300 ~ 1,500 min ⁻¹
	Motor	AC servo motor
Centering device	Control system	Back/forward manual adjustment system, up/down automatic adjustment system
Centering pin device		Exchanging system
Measuring device	Measuring probe	Flat type carbide probe Φ7
Loading/unloading device	Control axis	Articulated 6 axes
	Robot hand	Loading hand · unloading hand each 1 set, insert pusher
Work stock	Pallet type	Standard pallet (240 mm x 300 mm) T-type pallet (190 mm x 370 mm)
	No. of pallet	2 pallets
	Measuring device of wheel side	
Oil cooling unit	Discharge quantity	12/14.4L/min
	Tank capacity	15 L
	Cooling part	Direct drive motor for B axis
STANDARD ACCESSORIES		
Tool box		
Spanner (for exchange of dressing wheel)		
T shape wrench (for exchange of grinding wheel)		

Note

※This product may be regulated by the Foreign Exchange and Foreign Trade Control Law. Be sure to consult us before exporting the product to a foreign country.

※Specifications in this catalog may be changed without notice due to improvement of the product, etc.

OPTION		
AE sensor		
In-process cleaning device	Cleaning wheel size	Outside diameter Φ150 mm
	Wheel rotation speed	300 ~ 1,500 min ⁻¹
	Motor	0.4 kW
	In-feed speed	0 ~ 240 mm/min.
	Motor for feeding	50 W
Washing device		
Mist collector	Motor	1.5 kW
Pallet changer	Motor	AC servo motor
	No. of pallet	10 pallets
Workpiece for lay down pallet specification	Magnet specification (cylinder type)	
	Magnet and suction specification (vacuum suction type)	
	ID gripper	
	Turning station	
Splash gun / Air gun		
Grinding fluid supply device		Tank capacity: 300 L
	Motor	0.4 kW
Drain pipe		
Camera for lay down pallet		
APX Tool Lab license		

DRIVE SOURCE		
Total electric capacity		AC200V (50/60Hz)
		15kVA
Compressed air	Primary pressure	0.35 MPa or more
	Air consumption	450 NL/min
Hydraulic unit	Maximum pressure	7MPa

NC STANDARD SPECIFICATIONS		
NC unit		FANUC Series 31i-MODEL B5
Control axis	Name of all control axes	X axis (In-feed)
		Y axis (Oscillation)
		A axis (Vertical turn)
		B axis (Insert rotation)
		C axis (Swiveling table)
Maximum simultaneous control axis		5 axes

MACHINE SIZE	
W×D×H	2,740 x 2,300 x 2,880 mm
Machine weight	6,500 kg

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