

**APX-105**

## STANDARD SPECIFICATIONS

Workpiece	Objects of grinding	Periphery and both side K-Land of standard insert (Standard and small diameter)
	Material	Carbide, Cermet, Ceramics, CBN, PCD
	Minimum inscribed circle	Equilateral triangle: 3.5 mm
		Others: 4.7 mm
	Maximum circumscribed circle	45 mm
Maximum thickness	15 mm	
X axis (In-feed)	Maximum rapid feed rate	10 m/min
Y axis (Oscillation)	Maximum rapid feed rate	30 m/min
B axis (Insert rotation)	Travel	∞
	Maximum rapid feed rate	100 min <sup>-1</sup>
C axis (Swiveling table)	Grinding range	-90~+95 deg. (Some limitations depending on the conditions.)
	Maximum rapid feed rate	9,000°/min
Spindle	Grinding wheel size	Outside diameter φ350 mm
	Spindle rotation speed	500~2,000 min <sup>-1</sup>
	Motor	7.5 kW
Tail stock	Maximum chuck pressure	10 kN (Theoretical value at supplied pressure 7 MPa.)
Dressing device	Diameter of dressing wheel	Outside diameter φ100 mm
	Wheel rotation speed	300~1,500 min <sup>-1</sup>
Centering pin device		Exchanging system
Automatic centering device	Control system	Back/forward, up/down automatic control system
Measuring device	Measuring probe	Fiat type carbide probe φ7
Loading unloading device	Robot	SCARA robot
	Robot hand	Loading hand, unloading hand each 1 set, insert pusher
Work stock	Pallet type / No. of pallet (vertical)	Standard pallet (240 mm x 300 mm) : 3 pallets
		T-type pallet (190 mm x 370 mm) : 4 pallets
Touch panel		5.7 inch handy type
Oil cooling unit	Cooling part	Y axis linear motor and grinding wheel spindle

## OPTION

Thickness measuring device		
AE Sensor		
In-process cleaning device	Cleaning wheel size	Outside diameter φ150 mm
	Wheel speed	300~1,500 min <sup>-1</sup>
Turning dressing device (with AE Sensor)		
Manual centering device	Control system	Back/forward, up/down manual adjustment system
Washing device		
Mist collector		
Workpiece for lay down pallet specification		Magnetic specification
Camera for lay down pallet		For lay down pallet Work position / phase
Pallet changer	No. of pallet	10 pallets
Splash gun / Air gun		
Grinding fluid supply device		Tank capacity: 300 ℓ
Oil grinding specification	Automatic fire extinguisher	
	Fire damper	
	Packing for oil grinding	
	Coolant temperature controller	
	Oil flow sensor	
Measuring device (for large diameter workpiece)		
Air blow for measuring		

## NC STANDARD SPECIFICATION

NC Unit	FANUC Series 31i-MODEL B
Control axis	X axis (In-feed)
	Y axis (Oscillation)
	B axis (Insert rotation)
	C axis (Swiveling table)
Maximum Simultaneous control axis	4 axes

## DRIVE SOURCE

Total electric capacity	12 kVA AC200 V(50/60 Hz)
Compressed air Pressure	0.35 MPa or More
Air consumption	450 Nℓ/min
Hydraulic unit	7 MPa
Maximum pressure	

## MACHINE SIZE

W×D×H	2,945×2,055×2,375 mm
Machine weight	6,000 kg

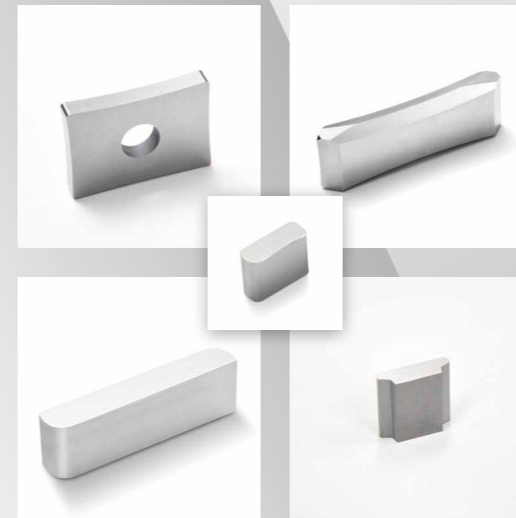
## JIGS OPTION

Grinding wheel	
Dressing wheel	
In-process cleaning wheel	
Driving arbor	
Clamping arbor	
Centering block	
Robot finger	
Centering pin	
Work guide	
Pallet	

## Caution

\* 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.

Fully Automatic  
Insert Periphery Grinder**APX-105****WAIDA** WAIDA MFG. CO., LTD

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# High-Productivity and High-Quality Insert Periphery Grinder with Two side K-Land Grinding by One -Chucking

Fully Automatic Insert Periphery Grinder

# APX-105

## MAIN FEATURES

### Product measurement



### Work head



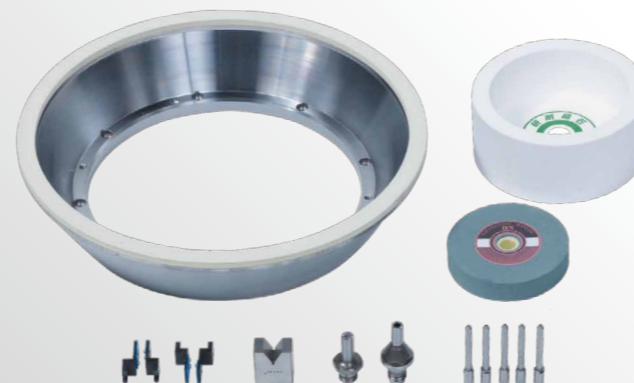
### Loading unloading device

option: Lay down spec.

Robot hand  
option: Lay down spec.



### Jigs Option



- 1 Periphery and Both side K-Land grinding by One-Chucking for standard throw away insert.
- 2 Interactive software, APX ToolLab, is standard specification.
- 3 Adopting SCARA robot for Loading-Unloading device, 2 vertical pallets can be equipped. Pallet changer is available as an option.
- 4 Periphery dressing of grinding wheel is available by turning dressing device (option).
- 5 Automatic oil mist lubrication system for feeding unit on X axis (In-feed) and Y axis (Oscillation).
- 6 In-process cleaning device, AE Sensor, Thickness measuring device, Lay down pallet specification are available as options.

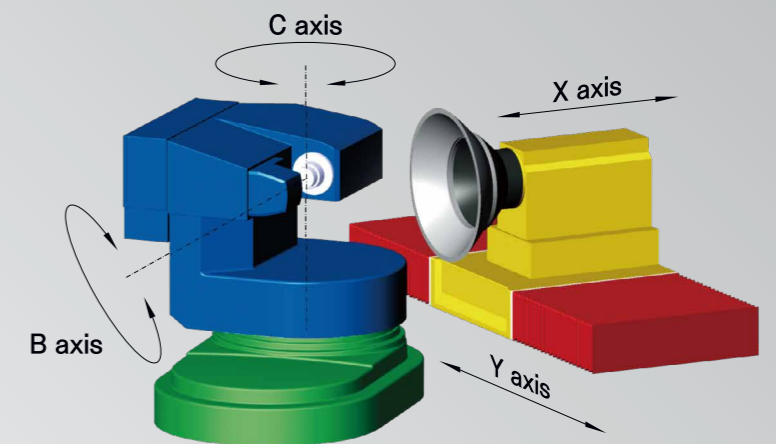
### Two side K-land grinding



### Operation panel



### Axis structure



X axis (In-feed)  
Y axis (Oscillation)  
B axis (Insert rotation)  
C axis (Swiveling table)