

**INTERNAL GRINDING MACHINE**

Your partner for presentation of the needs

**SIGC** series**Features**

The structural parts are Manufactured 'from high quality Meehanite cast iron, tempered and precision machined far maximum durability and long service life, Too machine design meets human-engineering theorem. and features easy operation and extra high precision,

Versatile cyclic grinding motions; include fully automatic grinding, coarse grinding trimming. Fine grinding. High spark-free grinding. High accuracy, convenient operation and increased productivity. The machine is ideal for both mass production and small lot flexible grinding ,operations.,

The spindle head employs high accuracy bearings roller bearings featuring , high rigidity and quiet running , it can be Swiveled + 8° making the machine ideal for' grinding big taper of work piece.

The feed axis employs up and roller type linear guide-ways combined with servo motor drive. it provides rapid traverse and high positioning. accuracy. and is. suitable for fully automatic grinding function , such as blind hole grinding, end fare grinding and taper grinding.

The: control System consists of high quality electronic parts that meet European safely regulations, The electrical cabinet features dust-proof and water-proof construction. The control system also features self- diagnostic function with warning lamp indication.

The machine is equipped with the advanced FANUC control with 8.4° colorful display. The CNC control uses macro machining programs that, greatly reduce preparation time while upgrading machining efficiency.

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Forced lubrication system for bed surfaces reduces friction to a minimum. The bed is designed with heat dissipation and outstanding strength, ensuring maximum stability, SHOKA self-developed conversational Operational interface for maximum Operational convenience and as easy to learn and understand. Automatic ,operation and multiple settings. This allows for selecting coarse grinding. Fine grinding. Non- sparkle grinding and dressing. High precision NC control provides automatic. dressing with compensation function. Ruggedly constructed throughout assures maximum rigidity and stability. Table spindle. X-axis and Z-axis are- driven by servomotors. Intermittent lubrication on X-axis. Provides maximum smoothness of movement.



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### Technical specifications

#### CNC/ NC series

ITEM		SIGC150	SIGC3006	SIGC3012	SIGC150	SIGC150B
Capacity	Range of I.D grinding	150mm	Φ20-300 mm	Φ20 -300 mm	Φ6 -150 mm	Φ6-150mm
	Max grinding depth	150mm	300 mm	300mm,	150mm	150mm
	Max holding length	200mm	600 mm	200mm	200mm	-200 mm
	swing over bed	520mm	480 mm	480 mm	520mm	520 rum
	Swing in chuck guard	280mm	350mm	350mm	-	-
Wheel head (x axis)	Rapid few speed	5 m/min	5 m/min	5 m/min	8 m/min	5 m/min
	Max. stroke	100 mm	200 mm	200 mm	100 mm	1100 mm
	Min, setting unit	0.001 mm	0.001mm	0.001 nun	0.001 mm	0.001 mm
	Rapid feed speed	8m/min	8 m/min	8 m/min	8 m/mm	8 m/min
Worktable (Z ,axis)	Max. stroke	450 mm	600 mm	800 mm.	450 mm	450 mm
	Min, setting unit	0.001 mm	0.001mm	0.001 mm	0.001 mm	0.001 mm
	Swivel angle	---	0 ~ L5°	-3 +12°(f)	---	---
Spindle head	Spindle speed	10 -1000 rpm	10-1000 rpm	10 -1000 rpm	10 -1000 rpm	10-1000 rpm
	Spindle	A2-5			A2-5	A2-5
	swivel angle	+8°	-	+8°	+8°	±15°
Rotary table	Rpm	---	---	----	---	0-20 rpm
	Min, unit.	---	--	---	---	0.001°
	Swivel angle	---	---	---	---	±90°
Motor	G/W spindle motor	2HP .2P				
	Spindle head motor	Servo 1.5KW	Servo 3.5 KW		Servo 1.5 KW	
	Z-axis servo motor	1.5KW	2KW	2KW	1.2KW	1.2KW
	X-x1S servo motor	0.75KW	1 KW	1KW	0.75 KW	0.75 KW
	Rotary table	---	---	---	---	1.2 KW
	Hydraulic lubrication	1/4HP 4P				
	Hydraulic system	1HP 4P				
Coolant	1/4HP 2P					
Packing	Size of Case	2900x1900 X2100mm	3900x2200 x1800 mm	4400x2200 x1800 mm	2900x1900 x2100 mm	2900x1900 x2100mm
	Net weight	2500 Kgs	5000 Kgs	6300 Kgs	2500 Kgs	3100 Kgs
	Gross weight	2700 Kgs	5500 Kgs	6700 Kgs	27m)Kgs	3300 Kgs

\* The above specifications are far reference onlly, we reserve the' right to alter them without further notice'.



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**State of the art CNC control**

The NC internal grinding machine is equipped with a Mitsubishi control. With powerful functions and conversational operation interface, the control uses touch-sensing screen, providing: words. Or graphs to replace conventional lamp indications of operation,

**Powerful function of NC control**

- Chinese/ English display conversion.
- Various operational mode selections.
- Parameter setting.
- Motion signals display for various mechanisms.
- Error messages display.

**State of the art CNC control**

The NC internal grinding machine is equipped with a FANUC (Oi-Mate TD) control. It employs macro (macro programs) operation interface combined, with the use of an 8.4" colorful LCD screen, greatly upgrading production and providing outstanding grinding accuracy.

**Automatic sensing device**

It can conduct fine surface, grinding of interior radii and the device monitors the 'wheel during operation, protecting it from overloading.

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### Standard accessories

- Grinding wheel spindle  
(Alternative 10000~30000 rpm)
- 3-jaw chuck
- Leveling plate
- Coolant tank (CNC)
- Tool box and tools
- Hydraulic system
- Diamond dresser
- 3-Point center rest



### Optional accessories

- Paper filter
- Magnetic separator
- End face grinding attachment
- Grinding wheel spindle
- Hydraulic 3-taw chuck.
- Hydraulic rotary cylinder
- Oil mist lubricator for grinding wheel  
(For spindle speed over 30.000 rpm only)
- Liner scale (X-axis)
- Oil skimmer



A Paper filter

B Magnetic separator

C End face grinding attachment



D Grinding wheel spindle



E Hydraulic 3-jaw chuck



F Hydraulic rotary cylinder



G Oil mist lubricator  
for grinding wheel  
(For spindle speed over 30,000 rpm only)



I Oil Skimmer