



## PRODUCT

- CNC Double Column Machining Center
- CNC Double Column High Speed Machining Center
- CNC Double Column 5-Face Machining Center
- CNC Double Column 5-Axis Machining Center
- CNC Double Column CrossRail Machining Center
- CNC Moving Column Horizontal Machining Center
- CNC High Precision Grinding Machine
- CNC Vertical Grinding Machine



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## SVG SERIES

CNC Vertical Grinding Machine





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We put innovation into practice

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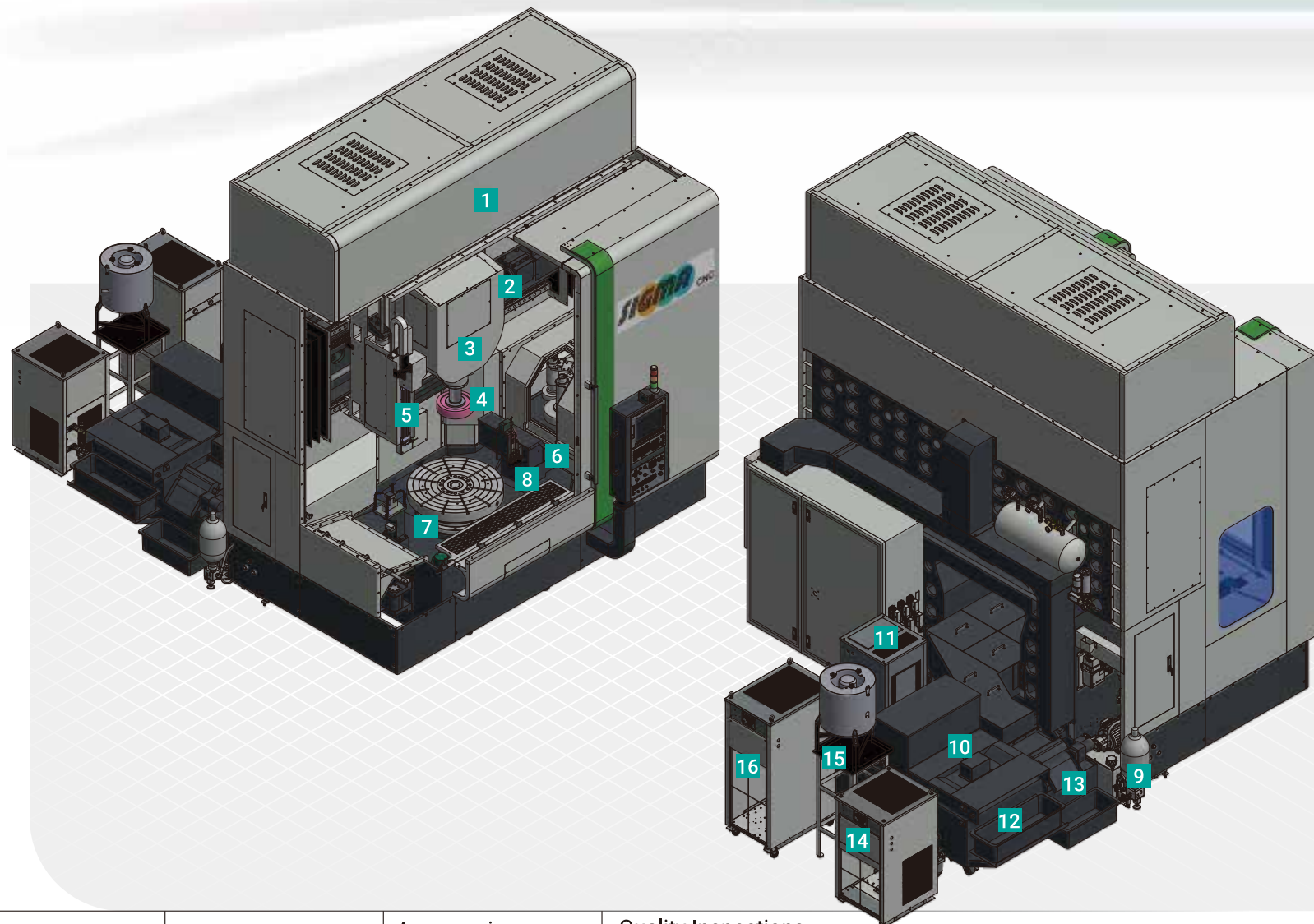


# CNC VERTICAL GRINDING MACHINE

## SVG-E600/800/1200

- High Precision
- High Stability
- High Rigidity
- High Efficiency
- Safety and Aesthetic design

The vertical cylindrical grinding machine has a highly rigid gantry structure design and is covered with a fully enclosed safety guard. It can be equipped with FANUC controller, Mitsubishi controller, and Syntec controller; It has SIGMA conversational programming functions that easy to understand and easy for operators use. Suitable for grinding the normal & heavy round workpieces' internal & external cylindrical and end faces.



### Main features · Peripheral equipment

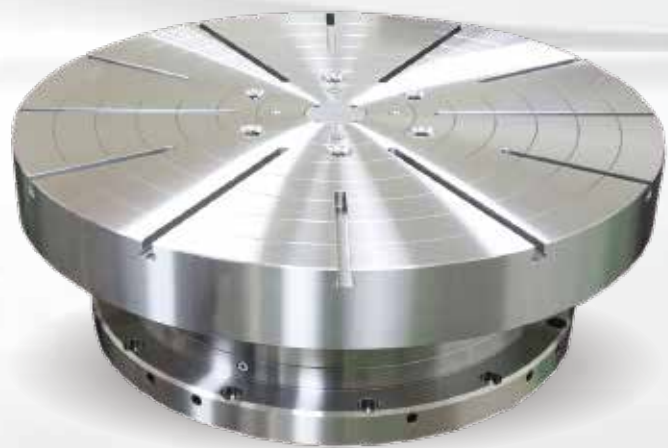
- 1 Fully enclosed safety guarding (standard)
- 2 X \ Z-axis linear scale feedback (resolution 0.1 $\mu$ m)
- 3 2 angle positions for grinding spindle ( 0° / 22.5° )
- 4 Grinding spindle, 15KW, max. 10000rpm, HSK-A100
- 5 Auto touch workpiece probe system ID/OD (optional)
- 6 Disc type automatic tool changing system (HSK-A100)
- 7 Hydrostatic rotary table ( $\varnothing$ 600 /  $\varnothing$ 800 /  $\varnothing$ 1200) Belt drive (standard), direct drive (optional)
- 8 Dressing diamond pens (standard), Electrical dressing unit (optional)
- 9 hydraulic unit for hydrostatic bearing
- 10 Coolant tank unit
- 11 Coolant tank temperature control unit
- 12 Paper filter unit
- 13 Magnet separator unit
- 14 Grinding spindle cooling unit
- 15 Oil mist collector
- 16 Hydrostatic system temperature control unit

Contents	Features	Accessories & Human Interface	Quality Inspections & Specifications
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## ACCESSORIES

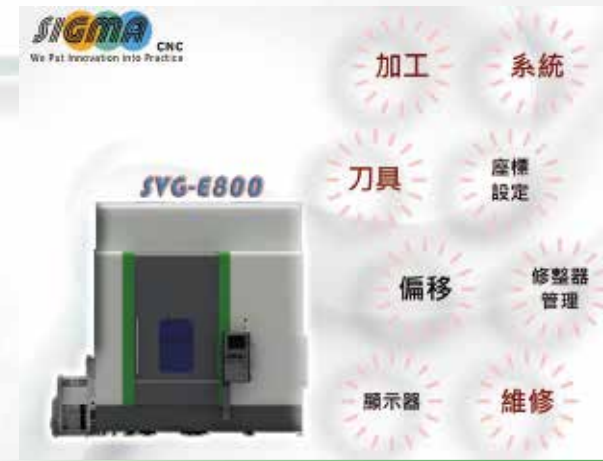
### Hydrostatic revolution table & workpiece spindle



- High rigidity design, under high loading conditions, the table maintains Axial & Radial Running accuracy less than 1 μm.
- High damping, good anti-seismic resistance, and extremely high operating stability.
- When grinding hard and brittle materials, it can inhibit the occurrence of cracks and improve processing efficiency and production yield.
- Low friction torque, wear-free, low noise.

## HUMAN INTERFACE

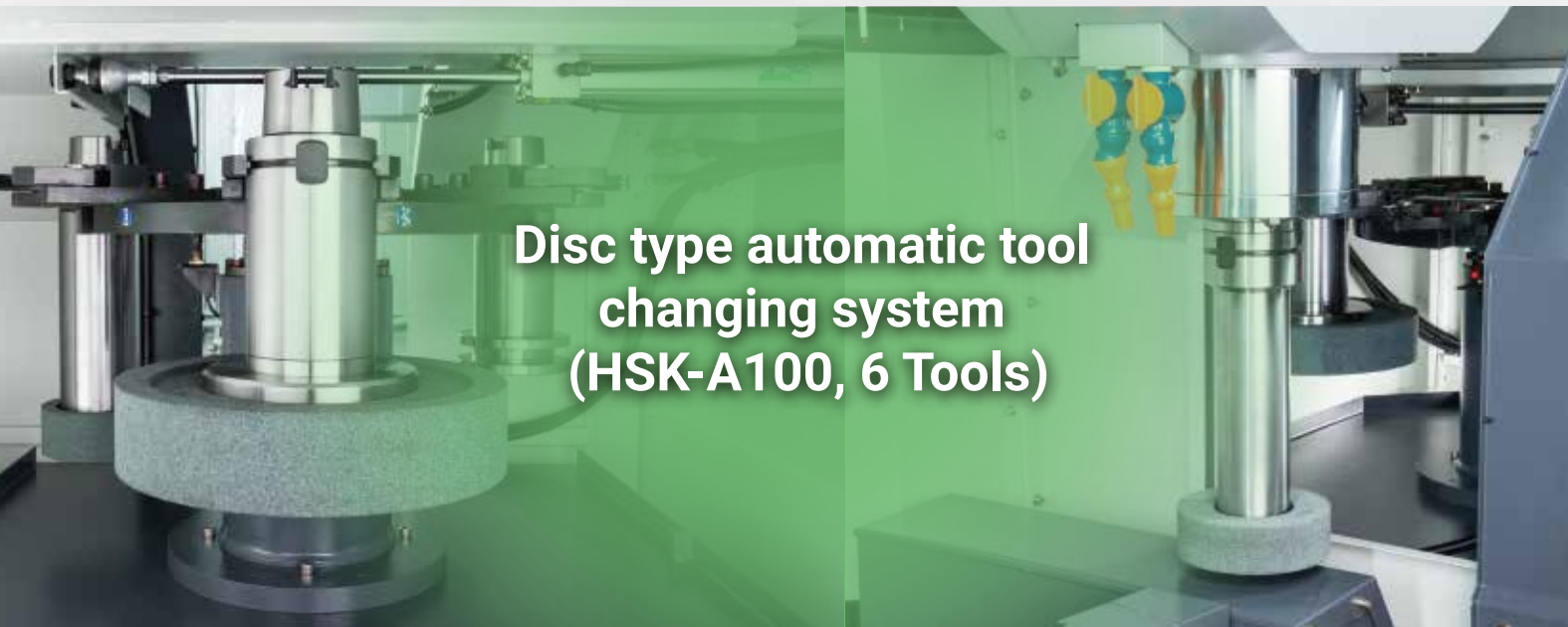
### SIGRID-conversational programming functions



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Wheel type setting



### Disc type automatic tool changing system (HSK-A100, 6 Tools)



Tool Magazine setting



Grinding conditions setting

- Dressing diamond pens (standard)
- Electrical dressing unit included diamond wheel (optional)

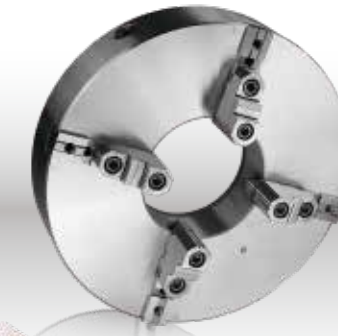


Auto touch workpiece probe system (Optional, Renishaw, UK)

### Fixtures Applications



3 jaws Scroll chuck



4 jaws Scroll chuck



Permanent magnetic blocks



Electro-Permanent magnetic chuck



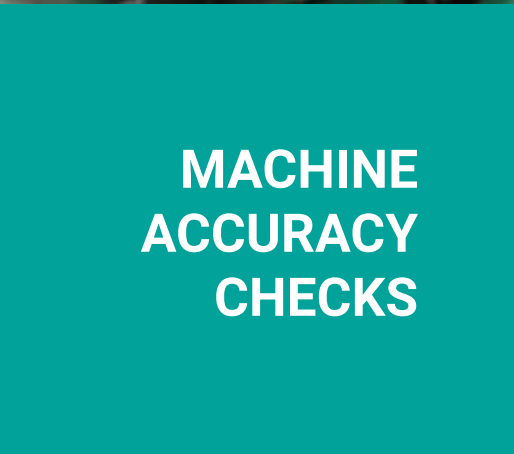
## QUALITY INSPECTIONS



## MATERIALS CHECK



## MACHINE ACCURACY CHECKS



## LASER INSPECTION



## Vertical Grinding Samples



ID cylindrical grinding



2-axes simultaneous OD cylindrical grinding (slop 5 degrees)



OD cylindrical grinding (grinding spindle at 22.5 degrees)

## SPECIFICATIONS

Item	Unit	SVG-E600	SVG-E800	SVG-E1200
Range of grinding internal diameter	mm	Ø50~Ø600	Ø50~Ø800	Ø50~Ø1200
Range of grinding external diameter	mm	Ø850	Ø1050	Ø1250
Work spindle swing	mm	Ø850 (Max.)	Ø1050 (Max.)	Ø1250 (Max.)
Grinding length <ID>	mm	325 (Ø250 or less) , 400 (Ø250 or more, tool length 250) , 485 (Ø250 or more, tool length 350)		
Grinding length <OD>	mm	400 (OD surface grinding, tool length 250), 500 (OD Surface grinding, tool length 350), 150 (angular grinding for same. dia).		
X axis travel	mm	1400	1600	1800
Z axis travel	mm	700		
Rapid feed rate of X axis	mm/min	0~10000		
Rapid feed rate of Z axis	mm/min	0~10000		
Min. input increment	mm	0.0001		
Work table size	mm	Ø600	Ø800	Ø1200
Height from work table to workpiece top	mm	600 (Including fixture)		
T-slot distance		60° x 6	30° x 12	
T-slot amount	pcs	6	12	
T-slot width	mm	12		22
Work table load capacity	kg	400	1000	5000
Distance from grinding spindle nose to table	mm	325		
Revolution of work table	rpm	5~200 min-1		
Work table power	KW	3.7 / 7.5 KW (cont. / 30 min. )		
Grinding spindle taper		HSK-A100		
Grinding spindle speed	rpm	100 ~ 10000		
Grinding spindle power(rated)	KW	15		
Grinding spindle positions	angle	0° / 22.5° (2 positions)		
Outer dia. of grinding wheel	mm	Ø45 ~ Ø305		
Thickness of grinding wheel	mm	max. 75		
Dressing spindle speed	rpm	max. 12000		
Dressing fixed shaft size	mm	Ø40 x 35L		
Dressing spindle power	KW	3.7		
Power requirement	KVA	55	60	65
CNC controllers		Fanuc, Mitsubishi, Syntec		
Machine height	mm	4100	4100	4100
Floor space	mm	5700 x 4900	5700 x 4900	6000 x 5500
Machine weight (approx.)	kg	13500	14000	15000

**Note :** The manufacturer reserves the right to modify the design, specifications, mechanisms, etc. to improve the performance of the machine without notice. All the specifications shown above are just for reference.

### Standard Accessories

- 1.Grinding spindle(Built-in motor 15/18.5KW), HSK-A100, Max. 10000 rpm, include air blow for dust-proof resistance
- 2.Linear scale feedback for X \ Z-axis (resolution 0.1um)
- 3.Dressing diamond pens, 2 points
- 4.Oil mist collector
- 5.Coolant cooling equipment (included water cooler)
- 6.Disc type auto Tool changing magazine (HSK-A100, 6T)
- 7.Full splash guarding with top roof
- 8.Auto greasing unit for X/Z axes
- 9.Program end & alarm lamp and Led work light
- 10.Hand wheel control (M.P.G.)
- 11.Interface RJ-45
- 12.Foundation screws & leveling bolts
- 13.Tool kit
- 14.Machine operation manuals
- 15.Controller operation manual & electric diagram
- 16.Machine accuracy test report

### Optional accessories

- 1.Electrical dressing unit include diamond wheel
- 2.Auto touch workpiece probe system (Renishaw LP2)
- 3.Auto touch workpiece probe system (Renishaw MP250)
- 4.Electro-Permanent magnetic chuck
- 5.Permanent magnetic blocks (3 pieces, 6 pieces)
- 6.Scroll chuck (3 jaws / 4 jaws)
- 7.Spindle monitoring system