

**ST** *Supertec*

CE



***Full Series High Precision Rotary Grinding Machine***

## High Precision Rotary Grinders

Rotary grinders are capable of grinding hard, brittle, general metal and mold materials.

These machines are also used for following variety of materials, semi-conductor, solar photonics, IC, Wafer, TFT-LCD, PASS ceramic products, aluminum oxide (Al<sub>2</sub>O<sub>3</sub>), Zirconium oxide (ZrO<sub>2</sub>), Silicon nitride (Si<sub>3</sub>N<sub>4</sub>), Silicon carbide (SiC), Silicon (Si), Quartz, ZTA Graphite, MACOR, Ru, etc. The variety of materials capable of being ground provides the customer exceptional versatility.

### Feature:

- Precision grinding machine
- Surface finishing to mirror class
- Automatic Trim Compensation
- On line spindle vibration monitor
- Machine base fully supported design creating high rigidity structure
- Y, Z and rotary axis driven by AC servo motor



▫ Picture includes optional accessories.



▫ Workpiece Sample



▫ Fully Supported Double V Base Design



▫ High Rigidity Column



▫ Automatic wheel dressing with compensation



▫ Full Enclosure

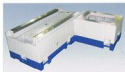
## High Precision Rotary Grinders

### Features:

- Siemens V3 grade spindle motor with superior performance and reliability is sealed to prevent moisture penetration
- Wheel head travel features 3 heavy duty linear roller guide ways for smooth vertical feeding and maximum rigidity.
- Fine pole electromagnetic chuck is used allowing for maximum work hold capability on small work pieces.

### High Rigidity Column

Column uses honeycombed structure providing high rigidity and accuracy.



### High Rigidity L Type Structure

Machine main castings use Meehanite Class FC 30 and are aged naturally over time allowing superior structural stability.

### SAMPLE PARTS



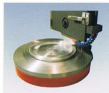
Horizontal Grinding Wheel



Picture includes optional accessories.

HR-16  
HR-20  
HR-24

## High Precision Rotary Grinders



Precision grinding spindle and rotary magnetic chuck



Spindle And Motor

The large spindle is supported by CP6 precision angular contact ball bearing. 10HP SIEMENS motor ensures powerful accurate cutting.



Excellent drainage system, easy to clean



Adjustable control panel



Automatic lubrication system



HR-32

Picture includes optional accessories.

## High Rigidity and Efficient Vertical Rotary Grinders



VR-40



VR-24



Grinding Operation

Picture includes optional accessories.

## PLC CONTROLS SYSTEM

Shop floor user friendly language allows inexperienced operators to master the control. The simple dialog control requires only size inputs to start the grinding cycle



## OPTIONAL CNC CONTROLS AVAILABLE



SIEMENS



FANUC



MITSUBISHI



On line wheel balance system. (OPT.)

## APPLICATION SAMPLES



Surface Grinding



Plunge Grinding

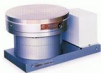


Step Grinding



Multiple Grinding

## Optional accessories



Magnetic rotary table



Basic coolant system



Coolant system with magnetic separator



Coolant system with paper filter



Coolant system with paper filter and magnetic separator



Oil mist collector



Spindle motor inverter



Chuck demagnetizer



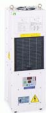
Digital readout



On line wheel balance system



Rotary diamond wheel dresser



Spindle chiller

DESCRIPTION	HR-12	HR-16	HR-20	HR-24	HR-32	HR-40	HR-48	VR-24	VR-40
Rotary magnetic chuck dia.	12"	16"	20"	24"	32"	40"	48"	24"	40"
Maxi grinding radius.	6.9"	8.8"	12.8"	12.8"	16.7"	20.6"	24.6"	12.8"	20.6"
Distance of table surface to spindle surface center.	14.0"	18"	19"	19"	20"	26"	26"	13"	16"
Rotary magnetic chuck speed .	20-250 rpm	20-250 rpm	10-150 rpm	10-150 rpm	10-80 rpm	10-60 rpm	10-50 rpm	5-50 rpm	5-20 rpm
Rotary magnetic chuck horse power.	750W	1KW	2KW	3KW	4.5KW	7KW	7KW	3KW	5.5KW
Spindle motor.	2HP	5HP/7.5HP(OPT.)	5HP/7.5HP(OPT.)	Siemens, V3 10HP	Siemens, V3 15HP	Siemens, V3 20HP	Siemens, V3 20HP	Siemens, V3 10HP/15HP(OPT.)	Siemens, V3 40HP
Spindle speed (50/60Hz)	3000/3600rpm	1450/1750rpm	1450/1750rpm	1450/1750rpm	1450/1750rpm	1450/1750rpm	1450/1750rpm	1450/1750rpm	1450/1750rpm
Auto downfeed horse power.	Servo Motor 500W	Servo Motor 500W	Servo Motor 500W	Servo Motor 500W	Servo Motor 1KW	Servo Motor 3KW	Servo Motor 3KW	Servo Motor 3KW	Servo Motor 2KW
Vertical hand wheel downfeed per revolution.	x1, x5, x10 (MPG) / 0.00005", 0.00025", 0.005"								
Vertical hand wheel downfeed per graduation.	x1, x5, x10 (MPG) / 0.00005", 0.00025", 0.005"								
Wheel size (dia x width x bore)	7"x0.5"x1.25"	14"x1.5"x5"	14"x1.5"x5"	14"x1.5"x5"	16"x2"x5"	16"x2"x5"	16"x2"x5"	6"x2"x1" *8 pcs	6"x2"x1" *8 pcs
Net weight / gross weight LBS	3520/3460	7040/8360	7700/8800	10120/11440	13640/15400	27500/29700	30800/34100	9460/11000	20900/23100
Packing size (LxWxH) FT	6'x4.8'x6.7'	7.9'x6.3'x6.9'	7.9'x6.9'x6.9'	9.2'x7.2'x7.2'	9.2'x6.9'x8.2'	10.5'x9.2'x8.2'	17'x8.2'x10.5'	9.8'x5'x7.6'	14.8'x6.6'x8.2'
Max Table Load LBS	66 lbs	110 lbs	264 lbs	616 lbs	1100 lbs	1760 lbs	2640 lbs	550 lbs	1760 lbs

\* The manufacturer reserves right to modify the design, specification mechanisms etc. without notice.

#### Standard accessories

- Grinding wheel
- Wheel flange
- Balancing arbor
- Diamond dresser and base
- Working lamp
- Standard tools

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