



SIMPLE GRIND

Simple Grind CNC is an Economical External Cylindrical Grinding Machine having straight / Angular wheel configuration suitable for plunge & traverse grinding applications. Infeed and table slides are powered thru Servo Motor, whereas workhead is driven thru induction motor. This machine is suitable for shaft grinding applications in industry segments like pump, electrical motor, textile and Automobile parts. Machine is available in three models SG 40, SG 63 & SG 100 CNC.

APPLICATION CASE STUDY



Electrical Motor Rotor Shafts



Automobile Parts



Pump Shafts

Industry Segment: Textile



Cycle time reduced from 514 sec. to 250~260 sec. thus productivity increased by 90%

Runout	: 2~3 micron
Cylindricity	: 1.21 micron
Roundness	: 0.61 micron
Surface finish	: 0.4Ra
Straightness	: 5 micron

Industry Segment: Submersible Pump



Cycle time reduced from 600 sec. to 278 sec.

Runout	: 7 μ m max.
Surface finish	: 0.4Ra
Size Variation	: Within 10~12 μ m
Abrasive Cost	: 2~3Rs/component

YOUR IDEAL CHOICE FOR CYLINDRICAL GRINDERS

SIMPLE GRIND

- An economical two axis servo controlled External Cylindrical Grinding Machine.

SALIENT FEATURES

- One piece Cast Iron Box Structure for improved Static, Dynamic & Thermal characteristics.
- Wheel Spindle with Ball Bearings for better rigidity & Lower running cost (no Hydraulics) & hence lower Life Cycle Cost.
- Cartridge type modular wheel spindle for easier maintenance.
- Integrated Electrical cabinet and control panel to reduce the commissioning time – Plug & Play Solution.

WHEEL HEAD

- Straight & Angular wheel configuration.

X & Z DRIVE – SERVO CONTROLLED

- Swiss scrapped V& Flat turcite Lined Guide ways for stick-slip free motion & longer life.
- AC servo motors coupled with Ball screw for axis movement.

WORK HEAD

- Poly V Belt and pulley drive system for efficient transmission.
- Circularity on standard test piece < 1.5 μm (< 1μm available as option)

TAIL STOCK

- Clearance adjustment facility for quill movement.
- Micro taper correction as std.
Hydraulic actuation as option.

CNC SYSTEM

- Servo control through Mitsubishi CNC.
- Fanuc / Siemens also available (as an option)

() Optional Features

- Hydraulic Actuation on Tailstock with Foot Switch.
- Auto flagging active type only.
- Gap eliminator & crash detector to reduce idle air cutting & better safety.
- In process gauging for plain surfaces only.
- Grinding wheel load unload device.
- VFD for work head with 1.1 Kw motor.
- Wheel RPM counter for safety.
- Semi-automatic wheel balancing unit.
- Paper cum magnetic filtration system.
- Magnetic separator system.
- Panel AC (optional with Fanuc System)

Sl. No.	Sector	Components
1	Automobile	Input Shafts, Main Shafts
2		Cam Shafts journals
3		Piston Pins
4		Intermediate Shafts
5		King Pins
6	Agriculture	Submersible Pump Shafts
7	Electrical & Electronics	Armature Shaft & Rotor Shaft
8	Other	Compressor crank shaft

Technical Specification				
DESCRIPTION	UNIT	SG 40 CNC	SG 63 CNC	SG 100 CNC
CAPACITY				
Angle of approach		Straight / Angular		
Swing Diameter	mm	350		
Grinding Diameter Maximum	mm	100		
Max Grinding Length	mm	400	630	1000
Max weight of job between centers	kg	80		
CNC System		Mitsubishi / Siemens / Fanuc*		
WHEEL SLIDE (X AXIS)				
Guideway Type		V & Flat turcite coated		
Slide stroke	mm	180		
Rapid feed rate (On Dia)	mm/min	5000		
Minimum increment pulse	mm	0.0001		
Feed servomotor torque	Nm	7 Nm		
Ballscrew	mm	Ø 32x5		
TABLE SLIDE (Z AXIS)				
Table stroke	mm	530	830	1230
Minimum increment pulse	mm	0.0001		
Feed Servomotor torque	Nm	7 Nm		
Ballscrew	mm	Ø40x10		
WHEELHEAD				
Maximum Grinding wheel size (ODX Width x ID)	mm	500x50 [80]# x 203.2		
Spindle motor power (Induction type)	KW	3.7 [5.5]		
Peripheral (surface) speed	m/sec	33 [45]		
Spindle bearing	Type	Hydrodynamic [Antifricition]		
WORKHEAD				
Spindle Taper	No	MT5		
Induction Motor Power	KW	0.25 / 0.5		
Spindle speed range- 8 steps	rpm	56-630 [variable speed thru inverter]		
TAILSTOCK				
Centre taper	No.	MT 4		
Quill Travel	mm	40		
Taper correction range	mm	±0.04		
HYDRAULIC UNIT				
Tank capacity	Litre	20		
Motor power	KW	0.55		
GENERAL				
Operation voltage	Volts	415+10% AC 3 Phase		
Connected Load	KVA	~ 10 [12.5] approx		
Machine weight (approx)	kg.	3500	4500	5500

NOTE :

- Items in brackets [] indicate optional items
- The basic machine is with Mitsubishi CNC and servo motors in X and Z axis
- *Above specifications are with Mitsubishi CNC system
- # with Recess
- Color shown in picture may not match with actual color due to printing limitations

Since continuous development is taking place, design and specifications are subject to change without prior notice and information

All disputes to Ghaziabad Jurisdiction only



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