

# High Precision Surface Grinders

Earth / Venus / Jupiter



**COSMOS IMPEX INDIA PVT. LTD.**

Cosmos House , 85/2 Atladra, Padra Road, Vadodara 390 012 (Guj.), India.

Tel: +91-265-3927000 Mob: +96620-44983

E-mail : sales@cosmos.in ( sales )

**GUJARAT**

Vadodara : +91 - 76000-30976

South Gujarat : +91 - 76000-30976

Ahmedabad : +91 - 70437-35005

Rajkot & Saurashtra : +91 - 99740-61567

**MAHARASHTRA**

Pune : +91 - 98509-89476

Kohlapur : +91 - 78758-97744

Nashik : +91 - 96378-27722

Aurangabad : +91 - 90496-93366

Mumbai : +91 - 70308-77977

**EAST INDIA**

Jamshedpur : +91 - 9771456300

Kolkata : +91 - 97714-56300

**NORTH INDIA**

Delhi & NCR : +91 - 93500-50200

Noida & Gaziabad : +91 - 93500-75724

Gurgaon & Bhiwadi : +91 - 93500-50200

Faridabad : +91 - 95999-10370

**PUNJAB**

Ludhiana : +91 - 98107-05736

**SOUTH INDIA**

Hyderabad : +91 - 75670-80452

Chennai : +91 - 75740-21485

Coimbatore : +91 - 90251-68602

Bengaluru : +91-99022-00025

Sales Inquiry : +91-96620-44983

Service Line : +91-93776-66555

07Jan2019



# State of the Art Manufacturing & Quality Control Facilities



## VISION

A Trustful, Innovative, Systems & Technology Driven company with Robust Manufacturing Capabilities to be *Your Partner in Progress...*

The manufacturing setup is ISO 9001-2008 certified, spread over 40,000 sq. feet and is equipped with latest mother machine shop with CNC machines like Horizontal and Vertical Machining Centers, variety of Turning Centers, 5 Face Double Column Machining Centre, Surface Grinding Machines and a CNC CMM in order to ensure the highest quality standards of the products. All our manufacturing companies have now adopted sophisticated ERP software to optimize allocation of resources and improve manufacturing efficiency. Our R&D team works on new technologies in collaboration with senior professionals from industry so that new machines can be regularly launched to meet the ever changing market needs.

## Global Exports

Our machines meet the stringent quality requirements of global customers and are already installed in Germany, China, Dubai Mexico, Africa & the Middle East...



## QUALITY ASSURED

We ensure every element on our machine meets the most stringent quality standards set by COSMOS to ensure long lasting accuracy and excellent mechanical stability of the machine.



## WYLER



» High Productivity

» High Accuracy

» High Flexibility

» Operator Friendly

**CUSTOMER SATISFACTION**

Over **3500+** CNC machines Installed

Over **12000+** Accessories Installed

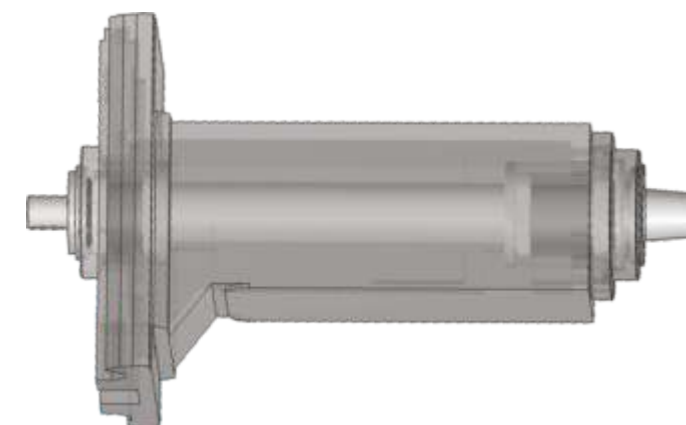
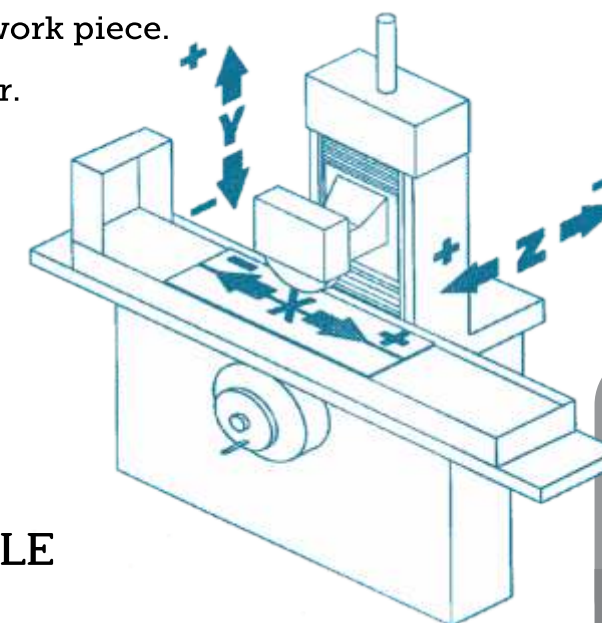
**65%** sales from REPEAT ORDERS

Fully equipped design center for development of special purpose grinding machines based on customer production requirement and continual development of existing machine range.

# RECIPROCATING SURFACE GRINDERS WITH COLUMN MOVING DESIGN



- V & Flat guideways with Turcite coating for All Axes
- Gives easier access for loading and unloading of work piece.
- All axes movements are independent of each other.
- Excellent squareness on the component.
- Table is fully supported during the whole stroke.
- This ensures improved flatness.



## SPINDLE

Super rigid and high precision spindle directly coupled to the motor and fitted with matched pairs of P3 class angular contact bearings greased for life. Very stable performance even under an extreme load condition by absorbing all the axial and radial loads.

- These high precision reciprocating type grinding machines bring versatility to your shop floor.
- Considering the high precision requirement of tool room application and also production requirements of large quantities, the mechanical structure has been designed to maintain a high degree of accuracy and adequate electronics have been provided for higher productivity.
- Our advanced and user friendly NC controller enables lesser skilled operators to achieve consistent level of accuracy.

## Features

- ▶ Auto Grinding cycle through NC control with programmable display unit
- ▶ MPG mode of operation for vertical Axis with minimum increment of 0.001mm
- ▶ Stepper motor with ball screw on vertical Axis for precise control ( For Earth Series )
- ▶ Induction motor with inverter for cross feed ( For Earth Series )
- ▶ Servo motor with ball screw on Vertical Axis and Cross feed for precise control ( For Venus Series )
- ▶ Hand scrapped V & Flat guideways with Turcite coating for All Axes
- ▶ Centralized Automatic Lubrication system
- ▶ Interlocks on Table traverse/ Magnetic chuck & Cycle start / Spindle rotation
- ▶ Magnet 'ON' & 'OFF' switch with power variator for magnetic holding from 30% to 100%

## V & FLAT GUIDEWAYS

Hand Scrapping creates contact points and Oil Pockets (High Spots and Low spots ) between mating surfaces & ensures that the mating components are perfectly matched. Turcite B coating allows mating surfaces to glide across each other without sticking. This results in smoother operation, better vibration damping & hence, enhanced geometrical accuracy and surface finish.



# Earth / Venus Series

## Advantages At A Glance

- Column Moving Design
- Auto grinding cycle
- Long lasting precision
- Simple to operate
- Good price /performance ratio
- Convenient control

### VERY RIGID SPINDLE HEAD

Box in Box structure of the spindle head ensures high structural stability during grinding.

The Column has double walled structure to ensure minimum deflection due to the grinding load, ensuring long lasting accuracy.



## MACHINE SPECIFICATIONS

FEATURES	Unit	E-7040	E-1050	V-1260	V-1570	V-2070
<b>CAPACITY</b>						
Grinding area	mm	700x400	1000X500	1200X600	1500X700	2000 x 700
Longitudinal travel	mm	750	1100	1300	1600	2100
Cross travel	mm	405	530	630	730	730
Distance between table to spindle centre	mm	525	650	650	650	650
Maximum load on table ( EM Chuck + component )	kg	350	600	750	1050	2000
<b>SPINDLE &amp; GRINDING WHEEL</b>						
Spindle motor	kW	3.7	5.5	7.5	11	11
Speed max	rpm	1400	1400	1000	1000	1000
Grinding wheel ( OD X W X ID )	mm	300X40X76.2	350x65x127	350x65x127	400x100x127	400x100x27
<b>FEED &amp; TRAVERSE</b>						
Table speed	m/min	1~28	1~28	1~28	1~28	1~28
Minimum incremental in vertical axis	mm	0.001	0.001	0.001	0.001	0.001
Rapid traverse for vertical axis	mm/min	180	300	300	300	300
Cross rapid traverse	mm/min	1200	1200	2000	2000	2000
Cross feed / stroke	mm/stroke	1~10	1~10	1~10	1~10	1~10
<b>OTHERS</b>						
Total power consumption	kW	7	12	14	20	25
Machine weight	kg	2500	4800	6000	7500	10000
Machine Dimension ( L x W x H )	mm	2900x2450x2000	4800x2600x2300	5200x3600x2300	6490x2850x3000	6990x2850x3000

\* Larger wheel size is available as an optional package along with higher spindle power & spindle cone  
 \* Specifications and design characteristics are subject to change without prior notice.

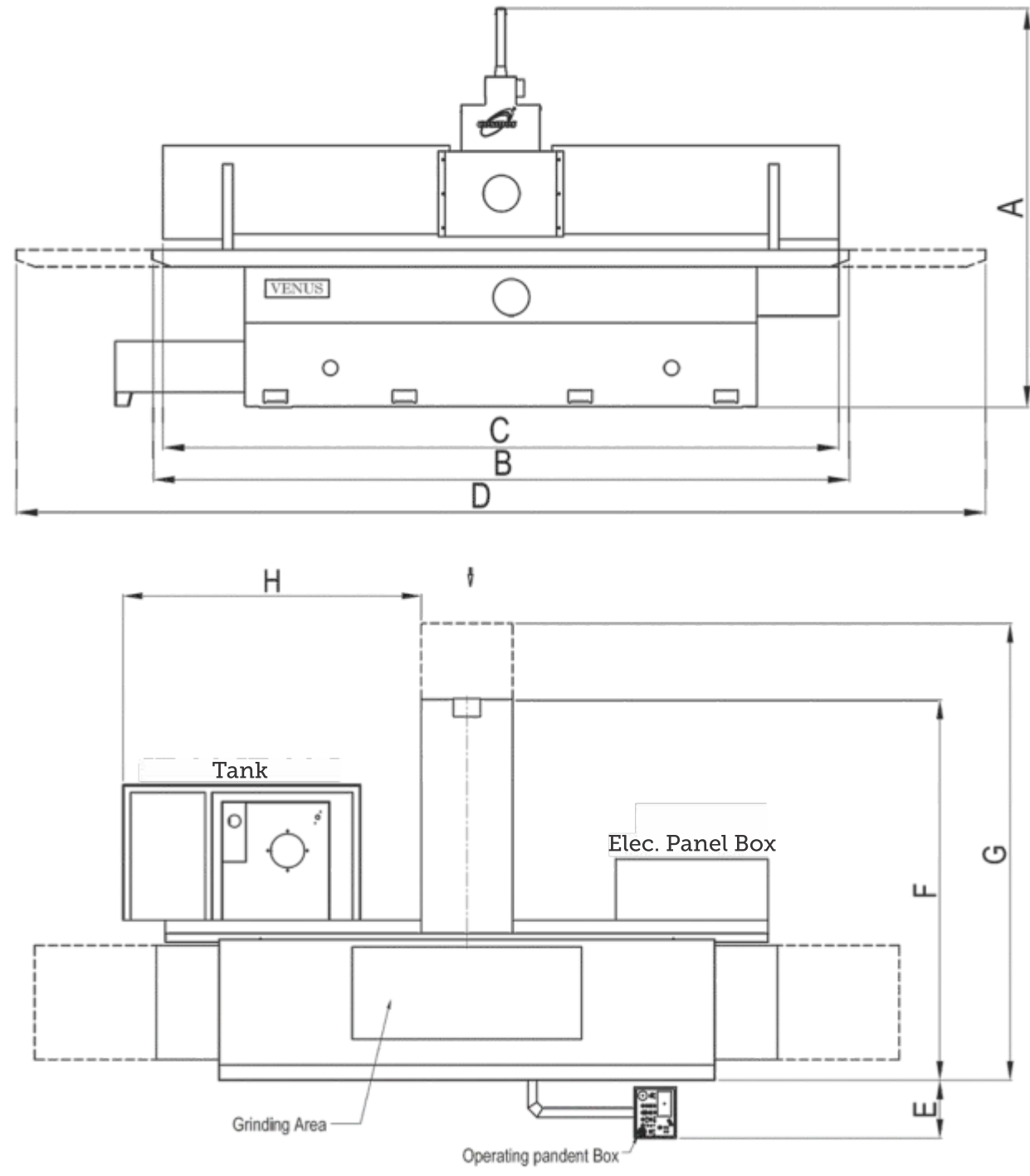
### Standard Accessories

- Vertical Axis Digital Display unit 1 no.
- Grinding wheel 1 no.
- Grinding wheel flange 1 no.
- Grinding wheel clamping /extraction bolt. 1 no.
- Balancing Arbor 1 no.
- Automatic Lubricating System 1 no.
- Coolant system
- Hydraulic power unit 1 no.
- Machine leveling pads 1 set.

### Optional Accessories

- Electro Magnetic Chuck
- Infinitely variable spindle speed
- Tool Makers Vice
- Automatic dresser with compensation
- Radius & angle dresser
- Static Wheel balancing Stand
- Auto Paper Band Filtration System
- Auto Magnetic Filtration System
- Dust Collector

# MACHINE LAYOUT



MODEL	A	B	C	D	E	F	G	H
E-7040	2570	2300	2220	3040	460	1600	2200	1000
E-1050	2500	3280	3000	4450	460	2100	2500	1100
V-1260	2500	3020	3900	5400	460	2720	3420	1420
V-1570	3000	4825	4710	6490	510	2850	2850	1570
V-2070	3000	5325	5210	6990	510	2850	2850	1570

# Intelligent NC Control

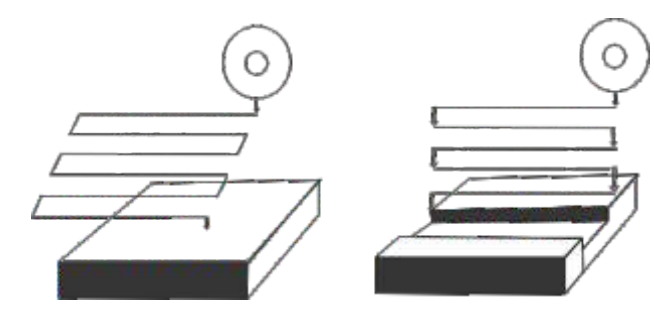
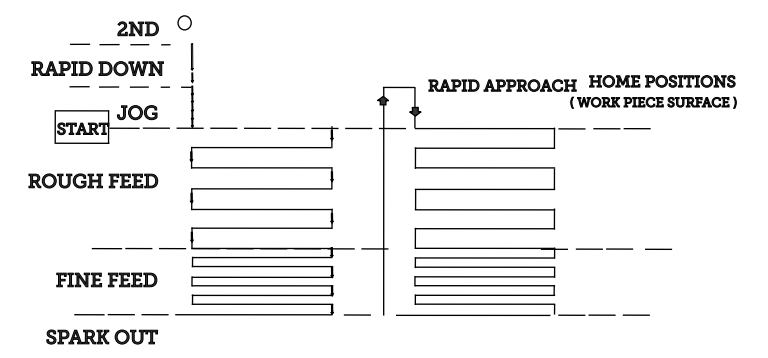
With this controller unmanned grinding is now possible . A single operator can operate multiple machines simultaneously.

This easy user interface with simple touch screen controller has been developed with one thing in focus " The Controller should be intelligent at the same time easy enough to allow both experienced and new users to produce finished ground components with the same degree of precision . "



## INTERACTIVE SCREEN

Total Rough Stroke :	500	μ
Rough Feed/ Stroke :	20	μ
Total Fine Stroke :	50	μ
Fine Feed / Stroke :	5	μ
Spark Out Cycle :	10	
Total Stroke :	550	



Traverse Cycle      Plunge Cycle

- Traverse Grinding
- Plunge Grinding
- Grinding with Manual Feed by MPG

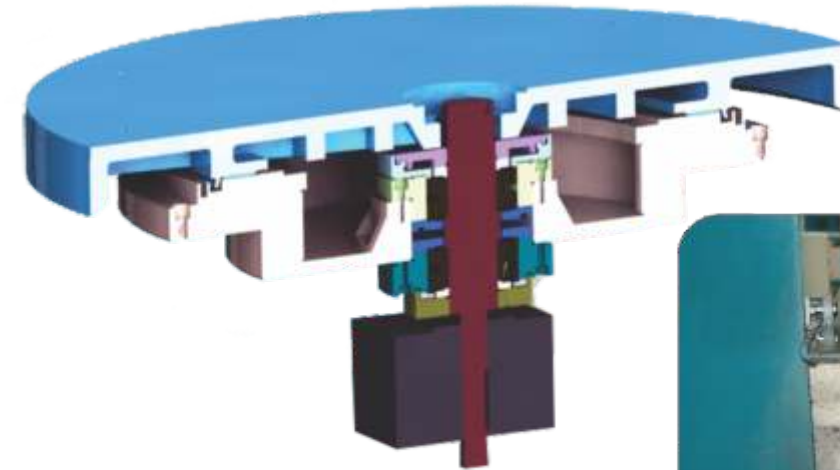
## ADVANTAGES

1. Ensures good productivity
2. Dependence over operator skill is eliminated
3. Gives uniform surface finish over complete production cycle
4. Reduces wheel consumption
5. Sturdy design and structure

# JR 800 CNC

# ROTARY SURFACE GRINDERS

# JUPITER

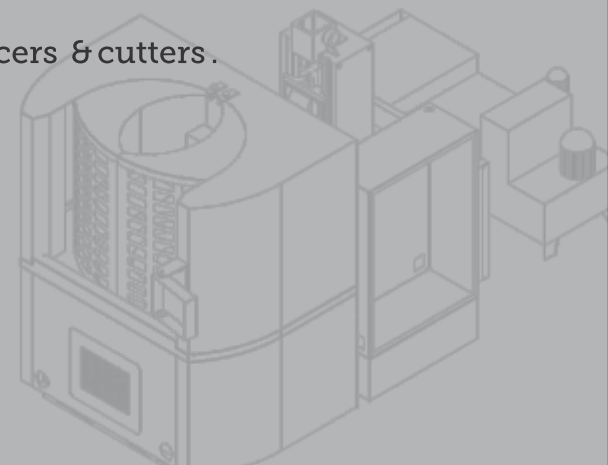


## ADVANTAGES

- Constant surface speed of table gives better surface finish
- Convenient working & simple to operate
- Compact Design saves space
- More Productivity as Wheel is in constant touch with Component
- Suitable for Ring type components like spacers & cutters.

## Standard Accessories

Vertical Axis Digital Display unit	1 no.
Grinding wheel	1 no.
Grinding wheel flange	1 no.
Grinding wheel clamping /extraction bolt.	1 no.
Balancing Arbor	1 no.
Automatic Lubricating System	1 no.
Coolant system	
Machine leveling pads	1 set.



JUPITER

FEATURES	Unit	JR-800	JR-1000
<b>CAPACITY</b>			
Grinding area ( Dia.)	mm	800	1000
Cross travel	mm	400	500
Distance between table to spindle center	mm	650	650
Max. load on table	kg	650	800
<b>SPINDLE &amp; GRINDING WHEEL</b>			
Spindle motor	kW	7.5	11
Speed max	rpm	1000	1000
Grinding wheel ( OD X W X ID )	mm	350x65x127	400x100x127
<b>FEED &amp; TRAVERSE</b>			
Table speed	rpm	10~60	10~60
Minimum incremental in vertical axis	mm	0.001	0.001
Rapid traverse for cross axis	mm/min	300	300
Cross feed	mm/min	2000	2000
<b>OTHERS</b>			
Total power consumption	kW	15	18
Machine weight	kg	6000	6800
Machine dimensions ( LxWxH)	mm	3550x3900x2900	3550x3900x2900

\* Larger wheel size is available as an optional package with extended column size, higher spindle power & spindle cone.  
 \* Specifications and design characteristics are subject to change without prior notice.

# CNC Surface Grinders

Fully Customized  
Advanced CNC Control



## GRINDING CYCLE

Until now the task of profile grinding depended much on the experience, knowledge and skill of the operator.

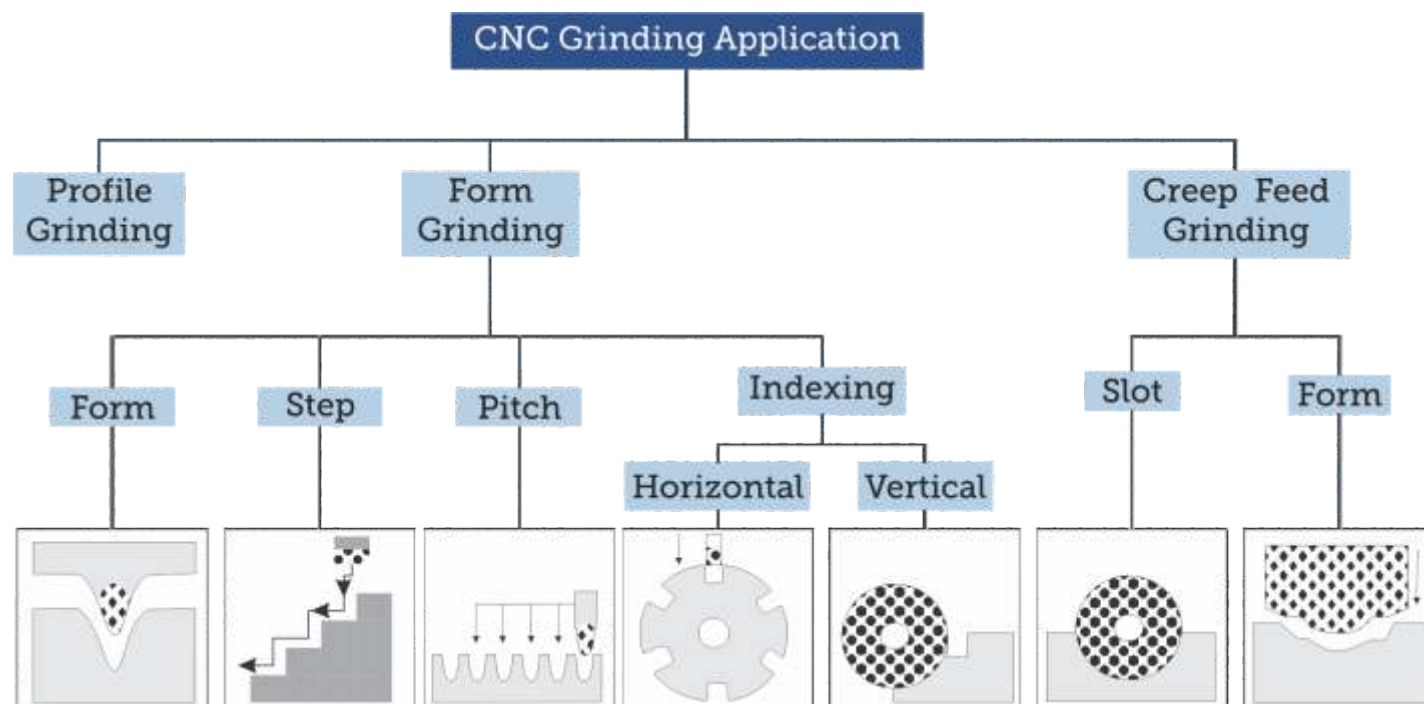
Now our CNC Surface Grinders facilitate easy step by step setting function for programming the infeed of the wheel, dressing cycle and profile for wheels using standard programming codes. Automatic dressing and dressing compensation function make dressing a fully automatic process.

CNC Controller facilitates programming options like :

- Macro programming
- Canned Cycle
- Plunge Cycle
- Traverse cycle

## COSMOS HMI

- Our Inhouse design team can closely work with customers and develop custom made Canned Cycle suiting to customers specific requirement.
- By doing so it becomes easier for the operator to set varying sizes of component of the same type.



# Special Purpose Grinding Machines

## Cosmos Design Team Speciality

Complete special purpose grinding solution for specific components or application with process and productivity prove out.



Crush Dressing Unit  
(Without Roll)



# Special Purpose Grinding Applications



Chuck Jaw



Steering Rack & Pinion



Small & Large Gear Blanks



Steering Piston & Pinion



Lever



VDI Tool Holder Serration



Thread Rolling Dies



Precision Spacers



Precision Rack & Pinion



Shearing Knives



Ring Grinding



Spline Shaft



Chuck Slot Grinding



Hirth Coupling



Yoke

# OPTIONAL ACCESSORIES



Dust Collector



Auto Paper Band  
Filtration System



Universal Magnetic  
& Paper Band Filtration



3 Point Diamond Dresser



Radius Angle Dresser



Disc Type Diamond Dresser



Static Wheel Balancing  
Stand



Sine Vice



Tool Maker Vice



Precision Vice



Universal Grinding  
Vice



Wheel Flange



Punch Former



Automatic Wheel  
Balancing System



Punch Grinder