

Providing quality machine tools and customer satisfaction since 1974

Grinding Control System

Exclusive DCM SD Controller provides on-screen display and adjustment of machine feeds, speeds, and monitoring of grinding functions. Desired parameters can be saved and recalled as a programmed grinding process for production runs or used in a manual mode for lab work and prototyping.

Variable Speed Rotary Tables

Available in magnetic, vacuum, hydraulic, and custom fixture configurations.

Grinding Spindle

Variable speed 5HP grinding spindle motor with preloaded precision bearings.

Mist Collection

Integral air mist collection system draws particulates and mist away from the work area, enhancing machine cleanliness and work environment.

Coolant System

Standard coolant pump and reservoir container in machine base. External conveyor filter system optional.

Manual Pulse Generator

Handwheel provides precise, effortless control of Z axis spindle positioning. Three selectable feed rates with steps of .010 in., .001 in., and .0001 in.

Contact Us:



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IG 140 SD Industrial Rotary Surface Grinder

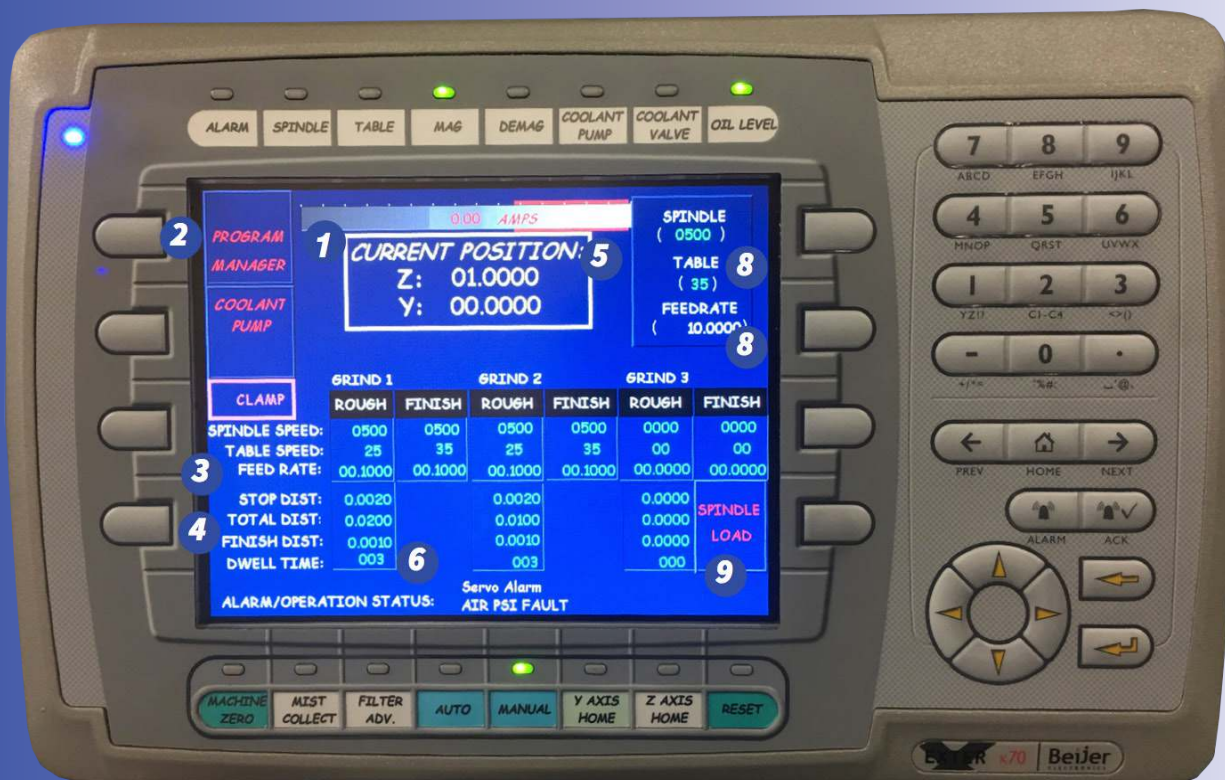


Fully enclosed grinding area in the IG 140 SD helps keep Lab and Production areas clean and enhances operator safety.



The heart of the IG 140 SD is DCM's proven Process Control System and operator interface. The high visibility LCD screen provides a plain text view of all grinding parameters, rapid retrieval of all saved programs, and quick entry of new ones. Grinding parameters may be edited "on the fly" allowing the operator to fine tune an operating program without stopping a grinding cycle. Selectable Grinding Programs are included on "SD" series grinders to provide the maximum flexibility in processing a wide range of materials:

- Grind from Zero — grinding proceeds a programmed amount below an operator set "0" point. A single button push sets "0" at any Z axis position.
- Grind to Height — grinding proceeds from an operator entered rough dimension to a pre-programmed finish dimension. Actual dimensions are used, and can be referenced from the machine table, grinding fixture, or a setting gauge.



1 Spindle Monitor features a bar graph display of spindle motor load. A secondary screen can be accessed to present a full screen real time graph of spindle loading. This provides important data regarding wheel performance and input for setting maximum spindle load. The downfeed is programmed to pause if spindle load exceeds desired limits. This is especially important with fragile workpieces where stress and heat can because damage.

2 Program Manager provides access to an additional screen that contains parameter settings for maximum spindle motor load, magnet alarm, automatic coolant system activation, wheel wear compensation, auto dress option and auto air mist collection.

DCM Tech

Rotary Surface Grinders

- 3 Speeds and Feeds** automatically transition from ROUGH to FINISH grinding at a pre-set point during the grinding cycle. This optimizes grinding wheel performance for both stock removal and surface finish.
- 4 Distance** or "Z" axis feed can be entered as grinding feed amount or as a part dimension. Feed is an amount below a selected "0" point and a part dimension is a height above the machine table, or grinding fixture, as set by the operator. Inch units to .0001", and metric to .001 mm resolution may be entered.
- 5 Current Position** displays wheelhead location in reference to the operator defined Z and Y axis machine zero position.
- 6 Dwell** or spark out time is the non-feed portion of the grinding cycle. In this case the dwell time is 60 seconds. At completion, the wheelhead will retract and shut down, allowing for removal of the part or repositioning for the next grind cycle.
- 7 Specialized Workholding Systems** Vacuum chucks, T slot tables, through table feed for hydraulic & pneumatic fixtures, and magnetic chucks are all available.
- 8 Manual Operation** values are displayed here. Downfeed is controlled by the manual pulse generator handwheel. If the grinder is in the Auto mode, the RPM and feedrate at each point in the grinding cycle appear in this area.
- 9 Single or Multi-Step Grinding** is available in all programs. Up to three sequential grinds are available. Parts can be ground on one side, flipped over, and finished on the otherside. Many parts can benefit from a third grind to remove minor distortion that occurs as a result of stress relieving during the grinding process. Each grind step picks up where the last left off, saving cycle time and enhancing precision.



6" Diamond PCB
Straight Cup Wheel



Product Number
20-08238-070-80

8" Diamond CBN
Straight Wheel Cup



Product Number
20-09141-004-80

Abrasive Options include a 8" diameter Segmented Wheel, conventional abrasive cup wheels, and 6A2 super-abrasive wheel hubs. Other wheel mount options are available. Correct wheel speed for a wide range of wheel diameters and abrasives is set using the variable speed spindle feature on the IG 140 SD. Single bolt wheel mounting provides rapid wheel changes.

DCMTech Rotary Surface Grinders

Call Today!!!
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General Specifications

Motors

Grinding Spindle Motor 5HP, 900 - 3600 RPM

Rotary Table Motor 1/4 HP, 5-70 RPM

Powered Head 500 Watt Servo Drive

Coolant Pump 20 GPM

Table Options

12" Variable Strength Concentric Magnetic, 3/8 Pole Pitch

12 T Slot or Drilled for Custom Fixture Mounting

Tables can be Configured to Through Spindle Vacuum/Pressure Feed

Capacity

Maximum Swing Diameter 14"

Chuck Work Load 150 lbs. (centered)

Grinding Wheel Options

Type 6 or Type 11 Cup Wheels in Aluminum Oxide,
Silicon Carbide, and Ceramic 3", 4", 6", 8" diam.

Cup and 2A2T CBN and Diamond Wheels . . . 6", 8" diam.

Segmented Wheel Kit 8" diam.

Feed System

Servo driven Z Axis with Precision Ballscrew and Encoder

Feedrate Variable from 0.0001 IPM to 100 IPM

Electrical Requirements 230V 60 Hz, 3ph, 60 Amps.

Consult DCM Engineering Regarding Operation on other Voltages

Dimensions 32" wide, 26" deep,

Weight 1000 lbs.



Integral mist collection and swarf removal heighten the cleanliness of the grinding process. The IG 140 SD is a low impact machine for the shop environment.

Check out our complete line of surface grinders



IG 380 SD



IG 280 SD



IG 180 SD



IG 080 M

DCM designs and builds a line of Industrial Rotary Surface Grinders and Automotive Rebuilding equipment. We have provided quality machine tools and customer satisfaction since 1974. Our response to customer needs over the years has allowed us to provide long lasting, application specific solutions to customers worldwide. Use of the DCM Tech Vertical Spindle Rotary Table Surface Grinders has consistently brought dollars to our customers' bottom line via process improvement.