

## Magnetic Chuck

Magnetic chucks feature a closely spaced concentric pole pattern which provides for deep magnetic penetration and firm, secure holding power. The standard chuck furnished with the Model E uses 110 volt DC power. A variable power supply (0 to 100%) and required controls can be supplied as optional equipment.

Note: For some applications it is desirable to replace the magnetic chuck with a fixture; or to mount the fixture on a plate, and hold the plate on the magnetic chuck. Our applications experts can help evaluate your specific needs and recommend a solution.



## Optional equipment for even greater efficiency and convenience

- Marposh in-process gaging unit, complete with controls
- 25 HP spindle drive for heavy-duty operation
- Variable power (0 to 100%) supply and controls for magnetic chuck
- Electrical equipment for 230 volt, 60 Hertz, 3 phase power supply
- Cyclonic or Magnetic Coolant Separators, complete with coolant tank pump, pump motors, and controls.
- All commonly used wheel handling, balancing, and dressing equipment

## Specifications - Model E Grinder

### Capacity

Magnetic Chuck – nominal dia.	16"
Magnetic Chuck – actual dia.	17"
Max. Dia. Swing in Water Pan	22"
Max. Work Height – new wheel	10"
Wheel Collet Flange Dia.	10½"
Standard Wheel Size	16" x 2" x 8"
Max. Table Stroke	15"
Max. Wheelhead Slide Travel	12"

### Speeds and Feeds

Grinding Spindle	1400 RPM
Table Slide – rapid traverse	300 IPM
Table Slide – inf. variable speed	5-225 IPM
Table Slide – adj. dressing rate	1-10 IPM
Rotary Table Speed – inf. variable	50-250 RPM
Feed Handwheel – one revolution	.040"
Feed Handwheel – finest division	.0002"
Wheelhead – rapid traverse	3 IPM
Wheelhead – inf. variable feed rate	.005-.220 IPM
Wheelhead – adj. dressing feed	.0002-.003 IPM

### Electrical Data

Standard Controls: EGP-1967-1	460V, 60HZ, 3PH
Wheel Spindle Motor – precision balanced	20 HP; 1800 RPM
Hydraulic Pump Motor – JIC	5 HP; 1800 RPM

### General

Coolant Reservoir	100 gal.
Hydraulic Reservoir	45 gal.
Floor Space	92" x 123"
Approx. Machine Net Weight	8500 lbs.
Approx. Weight – crated	9900 lbs.



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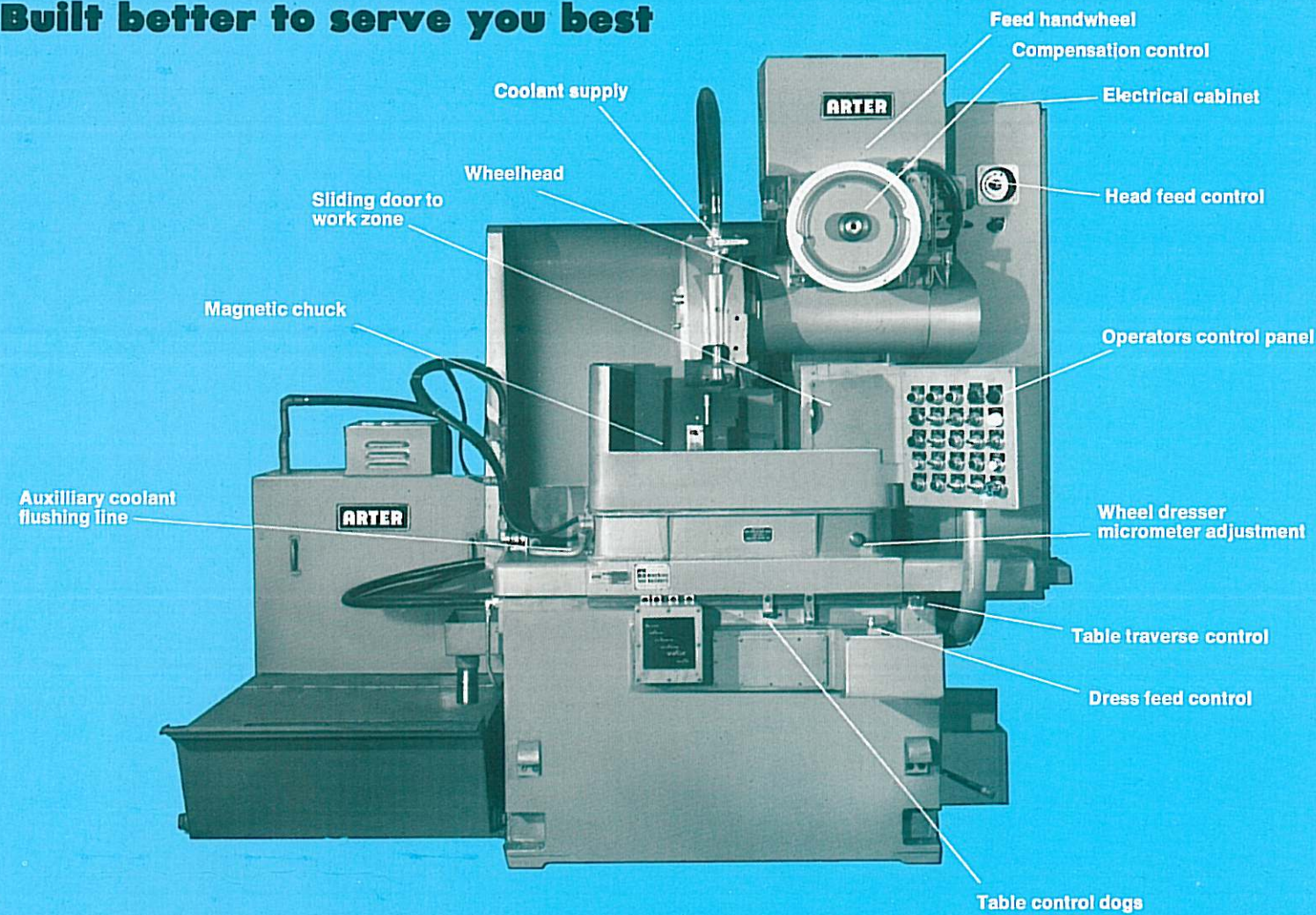


## Arter Model E high-production rotary surface grinder

The Arter Model E is a fully automatic 20 HP production grinder built to keep on going – shift after shift; day after day. Designed for continuous repetitive production where heavy stock removal is required, the Model E is your best bet for performance, reliability, and fast investment payback.

The fully automatic cycle makes the Model E easy to use. Massive cast-iron construction gives this saddle-type rotary the strength and rigidity to take full 20 HP cuts; yet gives you the superior finish, flatness, and parallelism you expect from an Arter Grinder.

## Built better to serve you best



### Operational Design

The Model E grinder is a saddle-type machine, with the wheelhead mounted on a vertical slide. The grinding spindle thus feeds down into the work; it does not move across it as with ram-type machines. The work is held by a magnetic chuck on a rotary table which is carried on a reciprocating slide. As the table rotates, the cross slide carries the work back and forth against the periphery of the grinding wheel. This design produces superior flatness and parallelism. And the concentric line pattern satisfies the demand for critical surface finishes.

### Wheelhead

The horizontal grinding spindle is mounted to a massive slide unit that travels on wide spaced rectangular vertical ways. A positive center guide way eliminates deflection and distortion. The spindle itself is carried in a heavy duty antifriction bearing assembled in a cartridge type unit which is lubricated and sealed for life. A hydraulic drive

provides infinitely variable wheelhead feed between .005" and .220 IPM.

### Table and Base

The rotary table, which holds the magnetic chuck, is mounted on a reciprocating slide that moves over the machine base ways. The table is driven by a hydraulic motor directly coupled through a worm and worm gear, and the spindle is supported by precision tapered roller bearings. Table rotation is infinitely variable from 0 to 250 RPM.

### Wheel Dressing

The wheel is trued by a diamond adjustably mounted on the work table slide, which has a separate dressing speed control. Diamond position can be changed, in "tenths," from the front of the machine. Wheel dressing – including compensation – is fully automatic and provides automatic part sizing. Manual dressing for machine set-up is easy and convenient.

### Wide Application

The Model E grinder is a versatile machine that can serve as a single-machine "grinding center" for many of your most difficult production grinding needs.

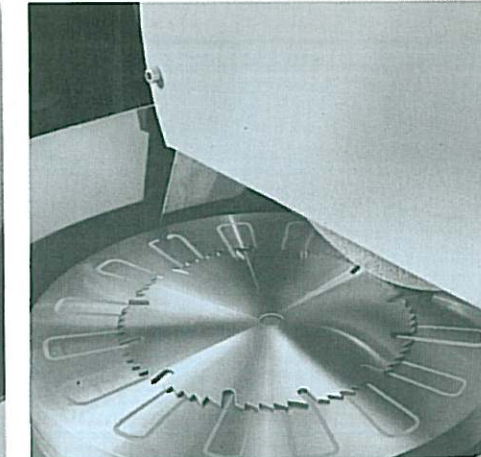
- You can batch grind as many identical pieces as the table will hold – and since the wheel is always in contact with the work, floor-to-floor times

are greatly reduced.

- With work speeds up to 1000 FPM, Arter grinders are ideal for parts sensitive to heat and warpage.
- The Model E delivers full 20 HP and has true abrasive machining capability. Heavy roughing cuts get parts down to size – fast.



Split rings are quickly ground in lots of five



Large saw blades are ground without warping or distortion



Here a fixture replaces the magnetic chuck

### Automatic Production Cycle

The simplified set-up procedure for the Model E consists of adjusting table dogs to suit the size of the work, and setting the height of the diamond dresser. Once set-up is complete, all machine motions occur automatically. The operator loads rough parts, energizes the chuck, and pushes the cycle start . . .

and the Model E does the rest. Wheel dressing and compensation are automatic. All non productive machine motions, such as wheel approach and nongrinding table travel, are accomplished at the maximum rapid traverse rate. The cycle can be set to grind to size with or without timed sparkout.

### Elevation Views - Model E Grinder

