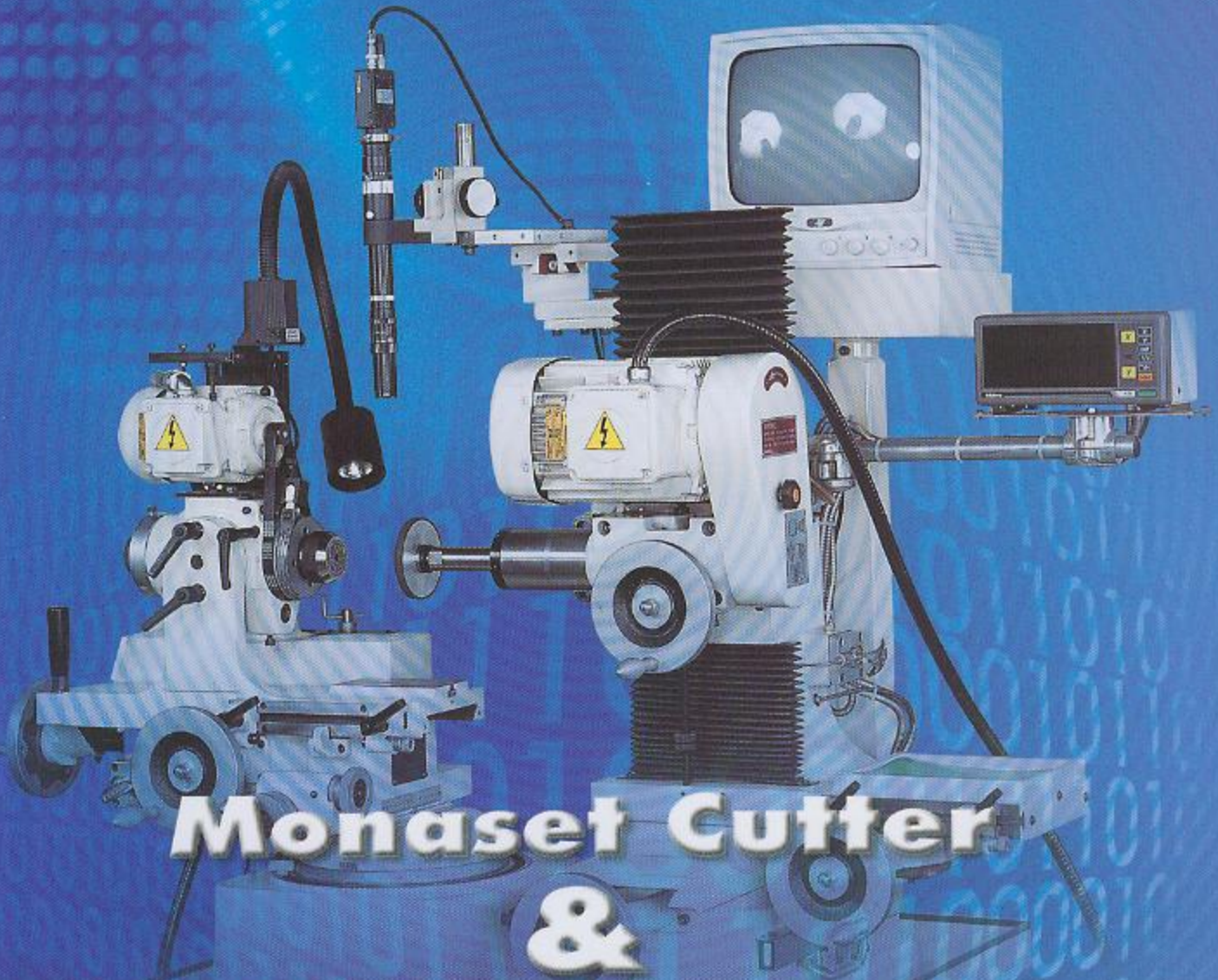




CM-A

MONASET Cutter Grinder



Monaset Cutter & Tool Grinder

TOP WORK INDUSTRY CO., LTD.

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MONASET

Proven Features for Quality Grinding.

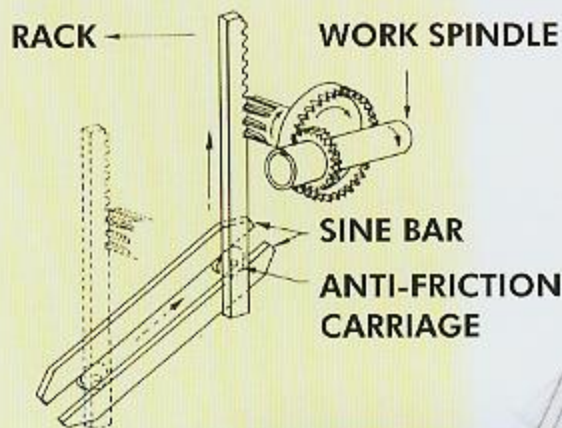
We looked at our successful Monaset grinder very closely before we came up with the engineering refinements which, when combined with its field concepts, make it an even better tool for sharpening, reconditioning or making small cutters from solid stock.

Here, for example, are the proven features that Monaset has - its capability for multiple grinding operations at a single chucking of the workpiece. This saves set-up time and assures excellent concentricity.

Monaset still maintains its versatility for generating straight or tapered, right- or left-hand and infinitely variable leads from a simple built-in lead mechanism.

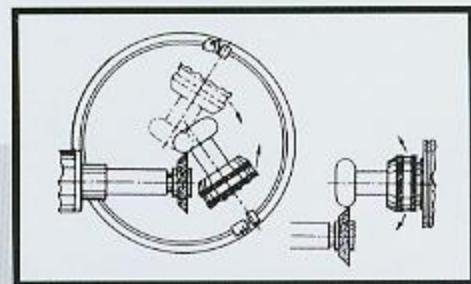
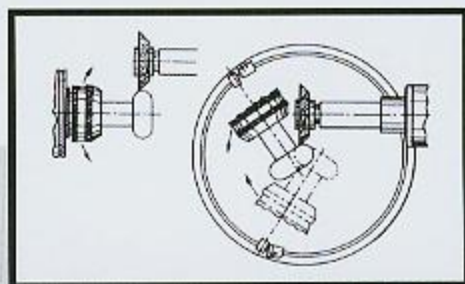
Turntable mounting of the entire workhead slide assembly, adjustable through 235 degrees in the horizontal plane, has proven to be a real asset when grinding radii.

Workhead that is adjustable on separate main slide, with dual handwheel control, has proven to be a boon for set-ups.



▲ Spiral mechanism generates infinitely variable leads.

■ illustration ■



The Monaset grinder's combination swivelling turntable and movable offset slide provides your shop with the versatile capability to quickly set-up and accurately generate convex and concave radii of varying sizes

CM-A

Accessories Features

The CM-A Series is equipped with a linear scale and digital readout systems on the X, Y and A axes. The High Precision Camera Device (C.C.D.) provides maximum operational convenience, accurate positioning, increased efficiency and allows for on-line quality control.

The machine features many versatile functions. It is ideal for precision grinding and regrinding for angles, arcs and profiles especially for small cutters.



■ LINEAR SCALE GRADUATION

X、Y AXIS : $5\mu\text{m}$ ($1\mu\text{m}$ optional)

■ ROTATION GRADUATION

A AXIS : 0.02°



■ C.C.D. SYSTEM

28 ~ 180 times
Variable focus change.



Standard Equipment

1. Wheelhead Toothrest Assembly with Extension Bar
2. Grinding Wheel Guards with Extension Bar
3. Front Stock Support
4. **Straight Cylindrical Collets:**
(Please select 'A' or 'B')
(A) Metric Sizes :
3, 5, 6, 8, 10, 12, 16, 20, 25 & 32 mm.
(B) Inch Sizes :
1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1, 1-1/8 & 1-1/4".
Also including set of 3 taper collets:
No. 2, 3, 4 Morse taper.
5. Set of (5) Grinding Wheel Flanges.
(4) Standard and (1) Extension Flange.

6. Diamond Holder Bracket
7. Wrench for Workhead
8. Toothrest Centering Gauge
9. Adjustable Tailstock Support Unit
10. Spanner for Grinding Wheel x 2
11. Levelling Blocks x 4
12. Standard Arbor
13. Screw Drive x 2
14. Set of Wrenches
15. Double-end Spanner
16. Set of (4) Index Plates for Spiral Lead Mechanism 0, 8, 10 & 12 Divisions.
17. Tool Box
18. Oil Bottle
19. Grinding Wheel (one each of straight, flaring cup and dish shape)

20. Diamond dresser
21. Spring-loaded index pawl for workhead
22. 1/2" wheel flange and spanner
23. Grinding attachment for large face milling cutter
24. 4" six-jaw chuck for workhead
25. Wheel flange with 2 collets for internal grinding
26. Wet grinding attachment with water proof equipment

Optional Accessories

1. B&S specifications: tapered collets no. 5, 7, 9.
2. Frequency inverter
(varies with motor horsepower)
3. Grinding wheel spindle motor (1 HP, 2 HP)
4. Special index plate (as specified)
5. Dust collector attachment





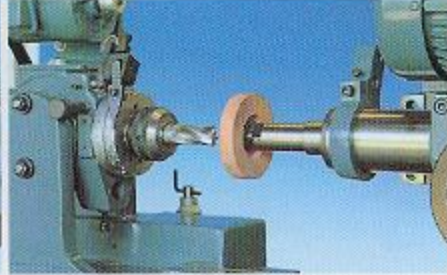
TOP WORK



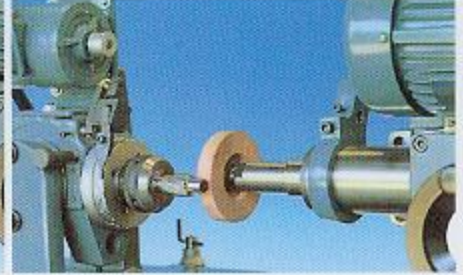
▲ 1. Screw Slot Surface Grinding



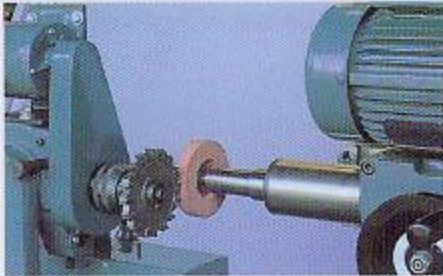
▲ 2. Screw Angular Grinding



▲ 3. Milling Cutter End Grinding



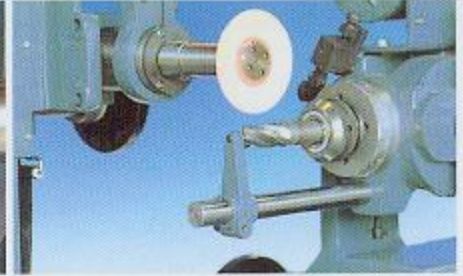
▲ 4. Grinding Outer Diameter



▲ 5. Side Milling Cutter Grinding



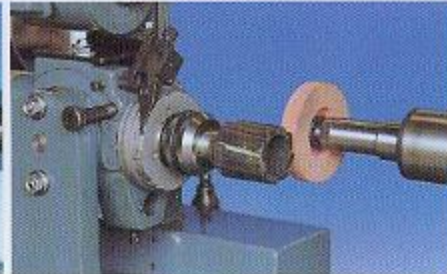
▲ 6. Formed Milling Cutter Grinding



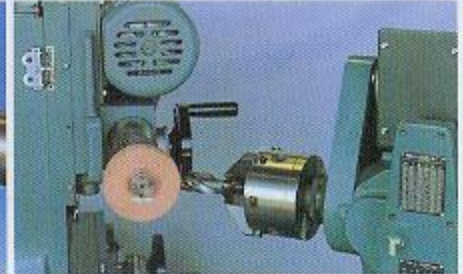
▲ 7. Centering Device



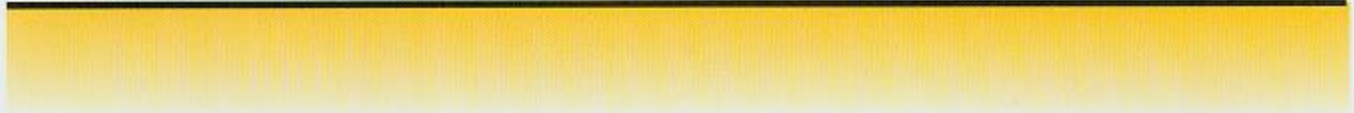
▲ 8. Arc Grinding



▲ 9. Vertical Milling Cutter Grinding



▲ 10. Drill Bit Grinding



Specifications

Capacity

Workhead:

Swing over main slide, max. diam. _ _ _ _ _ 304mm

Collet work diam., max. _ _ _ _ _ 32mm

min. _ _ _ _ _ 3m

Lead generated by spiral lead mechanism, min. _ _ 0~45°

Length between spindle nose and tail center, max. _ 152mm

Wheelhead:

Grinding wheel diam. max. _ _ _ _ _ 100Ømm

Motors, Electric

Workhead drive, AC _ _ _ _ _ 1/4HP

Wheelhead drive, AC _ _ _ _ _ 1/2HP

Floor Space and Weight

Area of base only _ _ _ _ _ 635mm x 660mm

Area required for machine _ _ _ 1524mm x 1701mm
(including swivel and overtravel movements)

Height, overall with wheelhead raised _ _ _ _ 1577mm

Net weight (including motors and controls) _ _ _ . 691kg

Range

Workhead:

Main slide travel _ _ _ _ _ 146mm

Offset slide travel, total _ _ _ _ _ 133mm

- front of center _ _ _ _ _ 76mm

- rear of center _ _ _ _ _ 57mm

Workhead angular adjustment:

Horizontal plane (turntable base) _ _ _ _ . 235°

Vertical plane, above center _ _ _ _ _ 40°

Wheelhead:

Longitudinal slide travel _ _ _ _ _ 152mm

Vertical slide travel, total _ _ _ _ _ 241mm

- above center _ _ _ _ _ 114mm

- below center _ _ _ _ _ 127mm

Cross slide travel, total _ _ _ _ _ 190mm

- front of center _ _ _ _ _ 76mm

- rear of center _ _ _ _ _ 114mm

Spindle Speeds:

(0%, -8% variation allowed)

Workhead, one speed _ _ _ _ _ 436mm

Wheelhead, three speeds _ _ . 40000,5729,8000rpm

Dimension

