



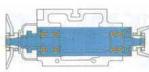
# UNIVERSAL CUTTER & TOOL GRINDER

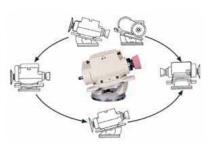


The wheelhead can easily tilt up to  $\pm$ 15 degrees, with a 360-degrees swivel on the horizontal plane. The wheelhead can grind any angle as the operator request. Two pairs of angular contact ball is designed to supported the spindle, bearing and tighten by nuts. The inner of wheel spindle has greased with lubricant and therefore doesn't additional lubricant is needed.



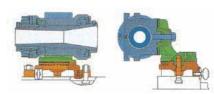






#### Universal Workhead

The workhead can rotate and adjust accurately in any angle, at either horizontal or vertical position. Spindle had taper at both ends, NT#50 (BT#50) and MT#50. That could increase working efficiency by various collets.

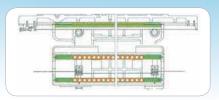


#### Working table

The working table can rotate 120 degrees, with  $\pm$ 60-degrees graduated scale attached. At the same time, the workhead can rotate 360 degrees to grind various cutting tool

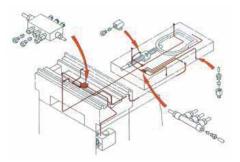












#### Precise ball groove of conformation

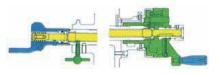
The machine apply precise ball groove which has special alloy steel.

The working table is driven by roll type of steel cable. That improves the work efficiency for operators.

#### Clutch

The feed of working table can control at various speed, both at low and high.

Working table of M-40 grinder has feed knob on both sides; while the clutch handle on the right hand side controls at lower speed, to prevent the interruption of its precision.



#### Tailstock

There are two tallstocks: one is fixed by bolt, while another one is fixed by spring pressure. The combination of tallstock and workhead works very well at steadily holding the workpiece, and achieve the best grinding result.



#### Centralized lubrication

M-40 machine has centralized lubrication system that ensures the great supply of lubricant to every part evenly. With such lubrication system, it ensures the machine to stay in great condition, and moreover it extends the durable life of the machine.

## UNIVERSAL CUTTER & TOOL GRINDER



#### NO: 01 RADIUS GRINDING ATTACHMENT(#1)

This is ideal for sharpening the radii of ball end mill. It consists of two slide bases, each with micrometer adjustment and a workhead with a M.T#5 or NT#50 taper spindle. It is also possible to mount an index plate on the back of workhead to index the straight flutes.



#### NO: 02 RADIUS GRINDING ATTACHMENT(#2)

This is suitable for corner radius grinding of face mill and shell end mills. The starting position for grinding is set with the micrometer to eliminate grinding error. The arinding capacity of this attachment is 0 to 1" radii (0 to 25mm) and 0 to 12" cutter diameter (0 to 300mm).



#### NO: 03 FACE MILL GRINDING ATTACHMENT

This attachment comprises a base, a horizontal swiveling table that runs parallel with the worktable, and a workhead that swivel up to 15-degree angle. This design simplifies the process of setting depression angles and elevation. Further more, this design allows greater capacity for M-40 to grind larger size cutters and tools.



#### NO: 04 HELICAL GRINDING ATTACHMENT

This attachment is suitable for grinding the relief and rake angle of spiral cutters or the straight teeth of hobs, end mills and center drills. The taper hole of work spindle is M.T#.4. The index MAX: 24(Standard).



#### NO: 05 CYLINDRICAL GRINDING ATTACHMENTS

This attachment is most suitable for straight or taper cylindrical grinding and for face grinding of various tools.



#### NO: 06 INTERNAL GRINDING ATTACHMENTS

This is generally used with the Cylindrical Grinding Attachment. It can also be used for grinding internal tapers. Capacity: Internal spindle-20,000rpm



#### NO: 07 WORKHEAD INDEXING ATTACHMENTS

Accurate indexing can be made quickly and easily by mounting the Indexing attachment on the standard workhead. This eliminates the need for a tooth rest which is normally required for grinding cutters. If not specified, workhead indexing attachment is provided with a plate of twenty four equally spaced slots, includes one 24 notched index plate, extra index plates desired, please specify number of notches.



This attachment offers extreme convenience when the extended spindle application is required. This spindle is also cartridge type construction. It is readily interchangeable with standard spindle. Spindle extension is



#### NO: 09 SURFACE GRINDING ATTACHMENT

Also known as "Universal Vise", and it is ideally for grinding bits as well as surface grinding. It consists of swivel vise and base. The intermediate support permits vise to swivel 360 degrees horizontally and vertically, so the workpiece can be set easily.



#### NO: 10 DRILL POINTING ATTACHMENT

This attachment has been designed to provide a simple, effective means of sharpening drills accurately with the minimum skills. The drill itself is held in a precision six jaw self-centering chuck, suitably geared to the operating



#### NO: 11 LATHE & PLANER TOOL GRINDING ATTACHMENT

This attachment facilitates setting cutters for grinding rake and relief angles. The large work support provides an outstanding grinding capability. This attachment is ideally for grinding cutters for lathes and planers.



#### NO: 12 SPRING COLLET CHUCK

This chuck can be mounted directly in the taper hole of the workhead. Size of collets:6, 8,10,12,16, 20, 25mm.



#### NO: 13 WET GRINDING ATTACHMENT WITH SPLASH PLATE

Also known as "Coolant Supply System". It is conveniently used for cylindrical, internal, surface and various cutters grinding works when a wet grinding or cooling is necessary.



#### NO: 14 DUST COLLECTOR

This accessory contributes toward operator safety and health by collecting dust particles flying off the grinding wheel during grinding. It is compact and minimalize pollutions of floor space.



### NEW

## UNIVERSAL CUTTER M-60 & TOOL GRINDER





· CCD Measurement (Optional)





• 5C collector (Option)

### **Standard Accessories**

- 1. Workhead
- 2. Left-hand tailstock
- 3. Right-hand tailstock
- 4. Diamond dresser holder
- 5. Wheel guard
- 6. Wheel guard
- 7. Wheel guard
- 8. Wheel guard
- o. Wilcol gaala
- 9. Wheel guard holder(long)
- 10. Wheel guard holder(short)
- 11. Universal tooth rest plate and blade holder extension
- 12. Center gauge
- 13. Collet wrench
- 14. Plain tooth rest holder (with offset blade)
- 15. Ejector rod
- 16. T-wrench for grinding wheel sleeve
- 17. Sleeve extracting bar
- 18. Pin wrench
- 19. Micrometer adjustable toothrest (with round top blade)
- 20. Levelling pads (3pcs)
- 21. Touch-up paint
- 22. Plain tooth rest holder (with offset blade)
- 23. Reducing collet B&S No.12 x No.10 (or MT No. 5 x No.4)
- 24. Reducing collet B&S No.12 x No.9 (or MT No. 5 x No.3)
- 25. Reducing collet B&S No.12 x No.7 (or MT No. 5 x No.2)
- 26. Grinding wheel sleeves (5sets)
- 27. Grinding wheel (6" x 3/4" x 1 1/4")
- 28. Grinding wheel (6" x 1/2" x 1 1/4")
- 29. Grinding wheel (6" x 1/2" x 1 1/4")
- 30. Grinding wheel (3" 1/2" x 1 1/2" x 1 1/4")
- 31. Grinding wheel (4" x 1/16" x 1/2")
- 32. Grinding wheel (5" x 1 1/2" x 1 1/4")
- 33. Grinding wheel (3" x 1/2" x 1/2")
- 34. Double end wrench
- 35. Nut wrench
- 36. Screw Driver
- 37. Nut wrench
- 38. Allen type wrench
- 39. Spacer for 1/8" dia. grinding wheel
- 40. Center for workhead spindle B & S No.7 (or MT No.2)
- 41. 4" spindle extension
- 42. 4" extension wheel sleeve and collar
- 43. Belt for spindle drive (Poly-flex belt)
- 44. Draw-in bolt for workhead and spacer
- 45. Tool cabinet
- 46. Extension and spacer s of slit-saw and side-mill cutters.

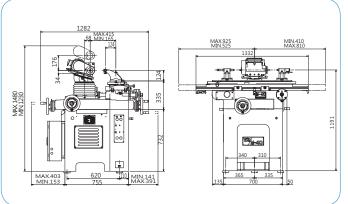


## **Machine Specifications**

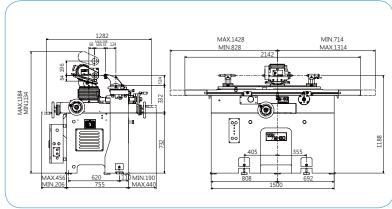
	M-40	M-60
Longitudinal movement of table	400 mm	600 mm
Distance between center	700 mm	900 mm
Cross movement of saddle	250 mm	250 mm
Workhead taper	MT#5	
	NT 50 (or BT50)	
T-Slot	15 mm (+0.05 mm $\sim$ +0.10 mm)	
Working range of table	135 x940 mm	135 x 1140 mm
Wheel speed	2600,3700,6200 rpm	
Wheel motor	1.5 HP(1.1 kw)	
Rotative angle of table	±60°	±60°
JOG adjustment of table	± 10°	±7°
Vertical movement of wheelhead	250 mm	250 mm
Inclination of wheelhead	± 15°	
Rotative angle of wheelhead	360°	
Distance between center of spindle and table	Max. 300 mm / Min. 50 mm	
Distance between center of spindle and T-slot	Max. 415 mm / Min. 165 mm	
Floor space	1550 x1735 x1480 mm	1550 x2740 x1480 mm
Weight	1160 kg	1260 kg

### **Dimensions**

M-40



M-60



All specifications are subject to change without prior notice.