

M1450B 万能外圆磨床

Universal Cylindrical Grinder

用途与特征

- M1450B系M1450A的更新换代产品，是一种手动操纵、电气、液压控制的万能外圆磨床，适用于圆柱形回转体工件的外圆表面或内孔磨削，用于单件小批量生产的场合。
- 机床工作台纵向移动可由液压无级变速传动，也可用手轮传动。砂轮架横向进给由液压作微量自动周期进给和快速进退，也可用手轮实现粗细两种进给。工作台纵向运动，砂轮架快速进退，砂轮周期进给等均由操作按钮，电气、液压控制。
- 头架主轴采用一滚一滑轴承结构，轴承间隙可调，适应顶尖或卡盘的各种磨削，头架在逆时针90度范围内可作任意角度调整，摆动头架或工作台或砂轮架的角度即可磨削不同角度的内外圆锥形工件。
- 砂轮架和工作台导轨采用静压润滑。砂轮主轴由三块扇形轴瓦支承，将砂轮架体壳上的内圆磨架翻下可磨削内孔。附有多套内圆磨杆供选择订购。
- 工件、外圆砂轮，内圆砂轮，液压泵和冷却泵分别由独立电机驱动。
- 机床的各运动部件均具有电气，液压联锁机构，操作安全可靠。



Main Application and Features

- M1450B Universal Cylindrical Grinder is an improved version renovated in design and structure from the basic M1450A. It operated under the control of electric and hydraulic systems or by manual intervention. It is suitable for grinding external and internal cylindrical surfaces of rotational parts in angle piece or small batch production.
- The table traverse is actuated hydraulically at infinitely variable speed or operated by hand. The rapid approach, withdrawal and the periodic micro infeed of the wheelhead are also effected through hydraulic means, in addition the latter can be manually operated in coarse of the infeed mode. All the above power functions are accomplished by pushing buttons or levels activating electrics or hydraulics.
- The structure of headstock spindle employs a rolling clearance. It is suitable for grinding between centers or on chucks of various sizes. The headstock can be swiveled counter-clockwise within 90 degree and by swiveling either the headstock or worktable or wheelhead the external and internal surfaces of workpiece with different taper can be ground.
- The worktable and wheelhead guideways are hydro-statically lubricated. The grinding wheel spindle runs in a pair of partial journal bearings each of which consists of three fitting segmental shoes. The internal grinding attachment bracket on the wheelhead can be turned down for grinding internal parts and the attachment is supplied with several sets of internal grinding quills.
- Workpiece, external and internal grinding wheels, hydraulic pump and coolant pump are all driven separately by individual motors.
- Each moving area in the grinder is controlled by electric and hydraulic interlocking mechanism, The external and internal wheel covers are strong and reliable, thus the grinder can be operated with ease and safety.

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规格及主要技术参数

Main Specifications

可磨最大直径 (外圆/内圆)	Max. dia. to be ground(O.D./I.D.)	Φ500/Φ200mm
可磨最大工件长度 (外圆/内圆)	Max. workpiece length to be ground(O.D./I.D.)	1500,2000,3000,4000/320mm
最大工件重量	Max. workpiece weight to be ground	1000kg
砂轮尺寸 (外径×宽×内径) (外圆)	Grinding wheel size(O.D. × W × I.D.),(O.D.)	Φ500 × 75 × Φ305mm
砂轮主轴转速 (高速/低速)	Wheel spindle rotating speed(High/Low)	1330,665r/min
内圆磨具转速	Internal grinding attachment rotating speed	10000,6000,4200,3000r/min
中心高	Center height	270mm
工作台最大移动量	Max. worktable travel	1500,2000,3000,4000mm
工作台最大移动速度	Max. worktable speed	3m/min
砂轮线速度	Wheel peripheral velocity	35m/s
砂轮架快速移动量	Wheelhead rapid approach and withdrawal travel	100mm
自动进给量 (粗/细)	Automatic infeed(coarse/fine)	0.02/0.0025mm
手动微量进给量 (粗/细)	Manual microfeed(coarse/fine)	0.02/0.0025mm
油泵流量	Hydraulic pump capacity	17.3L/min
油泵压力	Hydraulic pump pressure	6.3Mpa
冷却液流量	Coolant capacity	50L/min
电机总功率	Total motor power	14.08KW
砂轮电机功率	Wheelhead motor power	外圆5/7.5KW(O.D.) 内圆1.5KW(I.D.)
机床重量 (净重)	Machine weight(net weight)	8600,9900,11350,13000kg
外形尺寸 (长×宽×高)	Overall dimensions(L×W×H)	5320,6090,10240,12280×2680×1560mm

工作精度

Working Accuracy

圆度 (外圆/内圆)	0.0015~0.0035/0.0025mm
Roundness(O.D./I.D.)	
纵截面内直径的一致性 (外圆/内圆)	0.008~0.012/0.015mm
Dia. uniformity in the long. Section(O.D./I.D.)	
表面粗糙度 (外圆/内圆)	Ra0.32 μm/ Ra0.63 μm
Surface roughness(O.D./I.D.)	

主要附件

Main Accessories

冷却设备	1套set
Coolant equipment	
砂轮外圆修理器	1套set
Wheel periphery dresser	
砂轮法兰	2件pcs
Wheel hub	
砂轮平衡轴	1件pc
Wheel balancing mandrel	
机床垫铁按顶尖距	12/12/18/22件pcs
Leveling wedge(1500/2000/3000/4000mm)	
内圆磨具	1套set
Internal grinding attachment	

特殊附件

Special Accessories

砂轮平衡架	1件pc
Grinding wheel balancing stand	
磁性分离器	1件pc
Magnetic separator	
镶片顶尖	2件pcs
Carbide tipped center	
开式中心架	2套sets
Open-type steady-rest	
闭式中心架	2套sets
Close-type steady-rest	
圆弧修整器	1套set
Radius dresser	
砂轮端面修整器	1套set
Grinding wheel endface dresser	
内圆磨具	1套set
Internal grinding attachment	

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