

MK84160/MK84200 数控轧辊磨床

CNC ROLL GRINDER



机床用途与性能特征

- MK84160/MK84200机床适用于冶金、造纸、有色金属加工行业，板带轧线辊子的修磨，也可用于辊颈的磨削加工。
- 该机床也可以同样适用于加工其它大型轴类工件的外圆，端面和锥面以及中高中凹辊面的加工。
- 机床采用西门子840D / 810D操作系统，径向进给由伺服电机通过无背隙蜗轮蜗杆、滚珠丝杠传动，
- 并且可选装数控测量装置，实现x轴的闭环控制，机床的重复定位精度可达±0.001mm，z轴由伺服电机通过蜗轮蜗杆一齿轮齿条传动，u轴(中高微量进给机构)由伺服电机通过无背隙蜗轮一蜗杆一偏心套杠杆机构驱动，实现砂轮主轴的微量进给。
- 机床可选配伺服中心架(u1轴)与数控测量装置配合使用可以用以校正工件安装时轴线的偏差。
- 配以翻箱机构和软着陆装置(选配)，可以对带轴承箱的轧辊进行辊面修磨。

Main Applications and Structural Features

- MK84160/MK84200 machine tool can be widely applied in the fields of metallurgy, papermaking, nonferrous metal processing.
- This machine can also be applied to process circle of other shaftlike workpiece, endface and conical surface.
- It adopts SIEMENS 840D/810D operating system, radial feed is drive by servo motor through worm gear and ball screw.
- Raster glass measuring device is optional to achieve the X axis closed loop control, accuracy of resetting for machine tool can reach ±0.001mm. Z axis is driven by servo motor through the worm gear and worm-gear rack, U axis (medium-high micro feed mechanism) is driven by servo motor through no back-gap-worm-worm gear-eccentric sleeve lever mechanism, implement the micro feeding.
- It can match servo center rest (U1 axis) with CNC measuring device to calibrate the deviation of axes.
- Set with repacking unit and soft lander (optional), to grind the face for the roller with bearing box.

技术规格参数 Specifications and Technical Parameters

最大顶尖距 Max. from top	5, 6, 8, 10, 12, 15m
工件最大重量(托架支承) Max weight of workpiece (Supporting bracket)	60吨 tons
工件转速 Speed of Workpiece	4-40转 / 分 circle/min
砂轮最高线速度 Highest speed grinding	45米/秒 m/sec
拖板纵向移动速度 Movement speed of dragging plate vertical	50 ~ 4000
砂轮架横向移动最大距离 Max.horizontal distance	900mm
砂轮架横向快速移动速度 Speed of horizontal movement distance	300毫米 / 分 mm/min
磨削中凸中凹量(半径上) Quantity of intensive	≤2mm
连续横向进给速度 Speed of continuous horizontal feed	0.002 ~ 1.2毫米 / 分 mm/min
周期横进给 Periodical horizontal feed	0.002 ~ 1.2毫米/行程 mm/distance
U轴手动微进给(电子手轮) U shaft manually feed (micro electronic handwheel)	0.001毫米 / 脉冲 mm/pulse
砂轮规格(外径×宽度×孔径) Wheel specifications (outer diameter × width × dia.aperture)	900/1100 × 100 × 305mm
尾架纵向移动速度(机动) Stern frame vertical movement speed (mobile)	1800毫米 / 分 mm/min
手动速度 Manual speed	1.3毫米 / 转 mm/circle
尾架顶尖套筒调节距离 Stern frame top sleeve adjusting range	500mm
中心架支承直径 Supporting dia.	Φ300 ~ Φ600、Φ600 ~ Φ900mm

主要电机 Main motor

工件(头架)电动机 Workpiece(headstock) motor	90千瓦
砂轮电动机功率(直流) Motor power for grinding wheel	75千瓦
拖板移动电动机扭矩 Torque of moving motor for plinker	42牛·米
砂轮架横进给电机扭矩 Wheel frame transverse feeding motor torque	16.9牛·米
测量进给电机扭矩 Torque of measuring feed motor	4.2牛·米
尾架移动电动机功率 Torque of moving motor for tail stock	1.5千瓦
尾架套筒调整电动机功率 Power of adjustable bush motor for tail stock	1.5千瓦
CNC中高磨削电动机扭矩 Torque of high grinding motor	6牛·米
静压导轨及润滑电机功率 Power of static pressure rail-guild&lubricating	1.5千瓦
动静压轴承供油电动机功率 Power of dynamic static pressure bearing and oil-supply motor	5.5千瓦

加工精度 Working accuracy

本机床达到的磨削精度如下 Grinding accuracy as follows:	
圆柱辊面磨削 Grinding for cylindrical roller surface	
圆度 Roundness (support with bracket)	0.002mm
圆柱度	0.005mm
表面粗糙度(工件与砂轮适宜时) The surface roughness (grinding workpiece and when appropriate)	Ra0.2 μm
曲线磨削 Curve grinding	
辊型误差(用托架支承, 中高量) Roller type error (high volume, with supporting brackets)	0.1mm 0.002mm / m
表面粗糙度 surface roughness	Ra0.2 μm

