

6 数控齿条加工机床

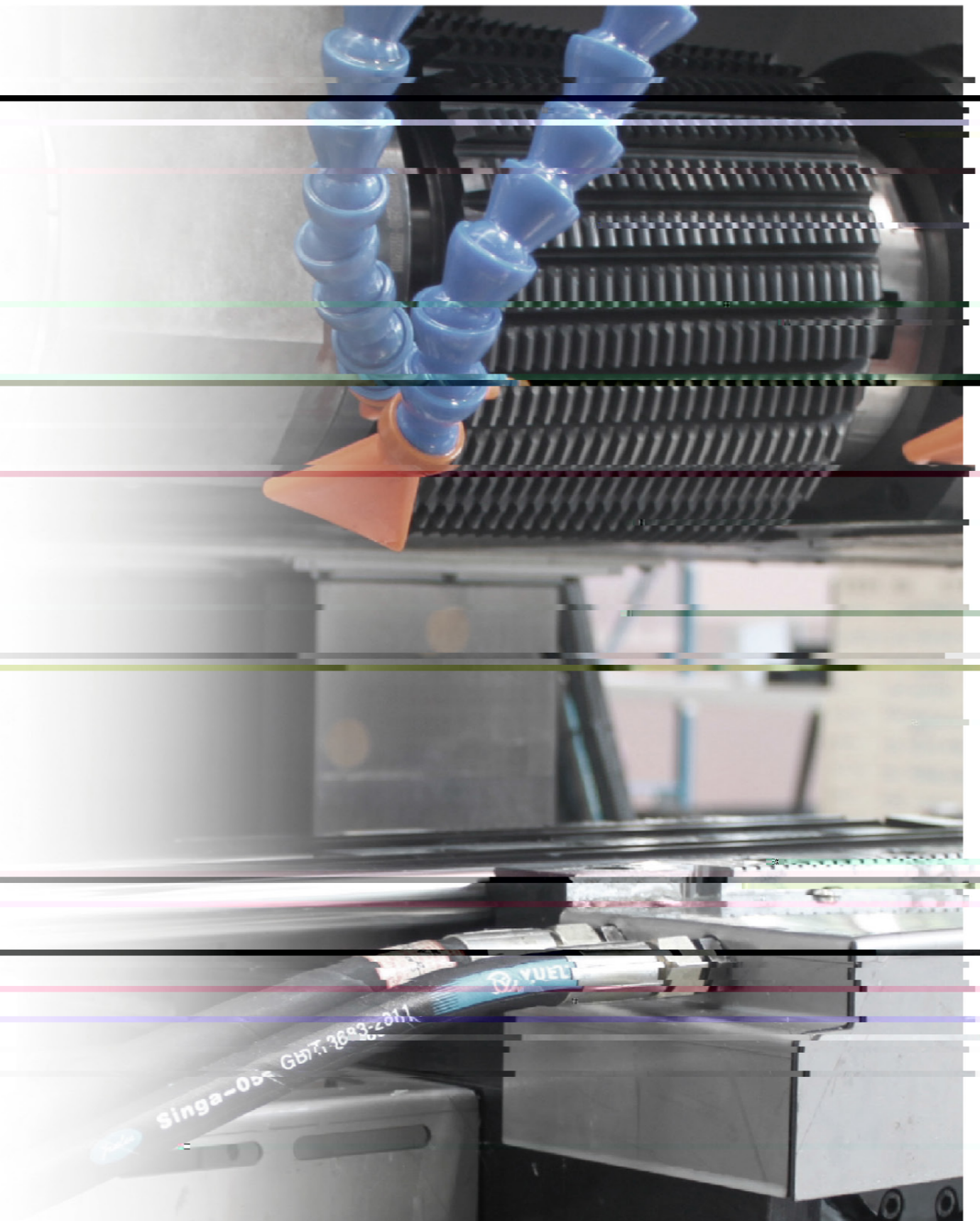
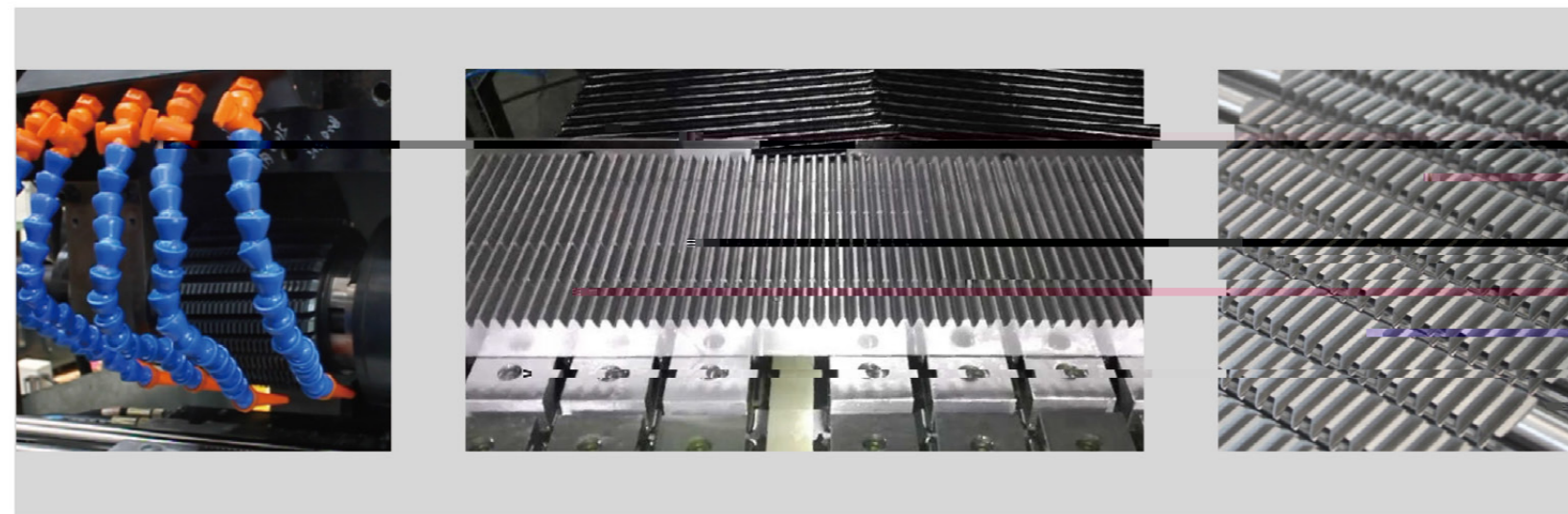
CNC RACK GEAR MACHINE SERIES

精密齿条制齿的全工艺制造机床 为客户提供全套解决方案

针对于汽车行业、电梯、工程机械、机床等行业的精密磨削加工，是单件的加工，还是高效的中小批量生产，亦或是大批量成型精密加工，我们都能全面为客户提供解决方案。

The whole process manufacturing machine for rack teeth provides customers with complete sets of solutions.

For precision rack processing in the automotive industry, elevators, machine tools and other industries; whether it is single-piece processing, or efficient small-batch production, or high-volume precision production, we can provide customers with a full set of solutions.



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数控齿条磨齿机

CNC RACK GEAR GRINDING MACHINE

机床特点

适用于各类直、斜齿条齿面的磨削加工，特别适合各种精密齿条齿面的磨削。机床主要技术特点：

1. 机床砂轮机械主轴由西门子主轴伺服电机驱动，内置动平衡仪，自动监测并实现砂轮的自动平衡；砂轮恒线速度磨削；
2. 机床配AE自动对刀系统；
3. 砂轮修整金刚石滚轮采用电主轴直驱，运转精度及转速精度高；
4. 配备了高灵敏性高精度的在位检测系统；
5. 机床排屑系统实现了磨削油温度的恒温控制；
6. 机床具有断电自动回退功能，确保机床运行的安全。

MACHINE TOOL FEATURES

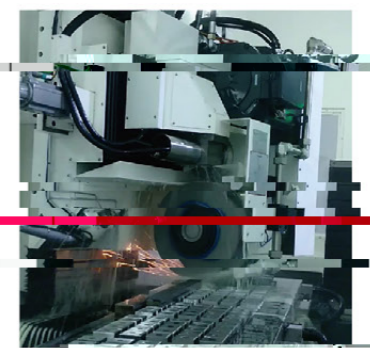
CNC rack gear grinding machine is widely used to the grinding process of all kinds of spur and helical rack gears, it is especially suitable for grinding various of precision hard rack gears. Machine tool main technical Feature:

1. The Spindle is driven by Siemens servo motor, built-in dynamic balancing instrument to automatically monitor and realize the automatic balance of grinding wheel. And keep Constant linear grinding speed.
2. Machine with AE automatic cutter match system.
3. Grinding wheel dressing diamond roller adopts direct drive by motorized spindle, with high rotation accuracy and high speed.
4. Equipped with high sensitivity and high precision in place measurement system.
5. The chip conveyor realizes the constant temperature control for grinding oil.
6. Automatically retract function when power is off to ensure the machine safety.



技术参数 THE MAIN PARAMETERS

名称 Description	型号 Type
	YK78200
最大加工模块 Max. module	18
最大加工工件长度 Max. workpiece length	2000
加工斜齿条最大角度 Max. helical angle	±20
主轴电机功率 Spindle motor power	45
砂轮线速度 Grinding wheel speed	12400
最大砂轮宽度 Maximum grinding wheel width	105
砂轮直径 Grinding wheel diameter	φ220~400
砂轮轴孔直径 Mounting diameter of spindle grinding wheel	φ152.4 (6inch)
金刚滚轮直径 Diameter of diamond roller	φ200
X轴最大行程 Max. stroke of X-axis	500
X轴最大进给速度 Maximum feed speed of X-axis	6000
Y轴最大行程 Max. stroke of Y-axis	2000
Z轴最大行程 Max. stroke of Z-axis	400
Z1轴最大行程 Max. stroke of Z1-axis	105
Y1轴最大行程 Max. stroke of Y1-axis	125
机床总功率 Total machine power	约110
机床重量 Total weight	约23
主机外形尺寸(长×宽×高) Main Machine Dimension	5.98x3.77x2.34



- 注:
1. 重量仅供参考，具体以实物为准。
 2. 外观防护分半防护、全防护，用户可根据实际需要进行选择。
 3. 公司持续创新机床设计，本手册中各系列产品参数将持续更新。

Note:
1. The weight is for reference only, and the actual product shall prevail.
2. The appearance protection of this machine tool has two options: semi-protection and full protection, which can be selected according to actual needs.
3. We continue to innovate machine tool design. The parameters of each series of products will be updated for reference only. If you have any inquiry, please contact us for the update.

数控强力齿条磨齿机

CNC POWER RACK GEAR GRINDING MACHINE

机床特点

1. 机床刚性好: 床架结构采用典型强冲击结构, 高强度铸铁, 打整优化, 双层磨齿系统, 恒线度磨削; 确保安全; 修整主轴等轴径设计, 驱动、定位分离设计, 确保修整工件;
2. 机床精度高: 机床导轨采用直线导轨和静压阻尼块组合方式, 提高导轨抗振性; 全闭环设计, 确保定位高精度; 电机外置或双泵, 为大流量溢流, 确保供油稳定;
3. 机床切削效率高: 机床配最大电机功率115KW, 利用率高达90%, 适用于深齿磨齿工艺; 配有电液伺服驱动, 确保安全; 配排屑器或排屑系统, 大流量冷却液冲屑, 流量开关保护, 确保冷却可靠;
4. 机床适配性: 机床数控系统采用SIEMENS 828D或840DSL; 根据加工工件的不同, 配不同磨削软件; 配有台架式修整器, 可选顶置式修整器; 能满足行或修整要求; 冷却罩设计, 配静电式油雾分离器; 可选配夹具、单机自动上下料等。

MACHINE TOOL FEATURES

1. Good rigidity of the machine tool: The machine tool frame adopts a typical strong impact structure, high-strength cast iron, optimized design, double grinding system, constant line grinding; ensure safety; grinding spindle diameter design, drive and positioning separation design, ensure grinding workpiece;
2. High precision of machine tool: The guide rail of machine tool adopts the combination of linear guide and hydrostatic damping block to improve the guide rail anti-vibration performance; full closed-loop design, ensure positioning accuracy; motor external or double pump, ensure oil supply stability;
3. The cutting efficiency of machine tool is high: the maximum motor power of machine tool is 115KW, and the utilization rate is up to 90%, suitable for deep tooth grinding process, equipped with power-off back function to ensure safety, with suction circulation belt filter chip removal system, large flow cooling liquid flushing, flow switch protection, to ensure reliable cooling;
4. Machine tool adaptability; the CNC system of machine tool adopts SIEMENS 828D or 840DSL; According to the different processing workpiece, equipped with different grinding software; configure the table-mounted dresser, optional top-mounted dresser; can meet the requirements of online dressing; equipped with table-mounted dresser, optional top-mounted dresser; can meet the requirements of online dressing; equipped with table-mounted dresser, optional top-mounted dresser; can meet the requirements of online dressing.



技术参数 TECHNICAL PARAMETERS

名称 Description	单位	型号 Type	
		YK7832	YKA7832
最大加工模数 Max. Addendum	mm	20	12
最大加工齿部长度 Max. Addendum Length	mm	320	320
主电机功率 Main Motor Power	kW	110	50
SP1轴转速 SP1 Shaft Speed	rpm	15000	15000
SP2轴转速 SP2 Shaft Speed	rpm	4500	4500
最大砂轮宽度 Max. Grinding Wheel Width	mm	740	740
最大砂轮直径 Grinding wheel diameter	mm	Φ600	Φ500
主轴砂轮孔安装直径 Main spindle hole diameter of grinding wheel	mm	Φ203.2mm (8inch)	Φ203.2mm (8inch)
X轴最大行程 Max. Travel range of X-axis	mm	1250	1250
X轴最大进给速度 Max. Feeding speed of X-axis	m/min	10	10
Y轴最大行程 Max. Move Distance of Y-axis	mm	480	480
Y轴最大进给速度 Max. Feeding speed of Y-axis	m/min	5	5
Z轴最大行程 Max. Move Distance of Z-axis	mm	450	450
Z轴最大进给速度 Max. Feeding speed of Z-axis	m/min	10	10
金刚砂轮直径 Emery wheel diameter	mm	160	160
砂轮中心至工作台面距离 Distance from grinding wheel center to worktable	mm	200-600	200-600
工作台面安装尺寸(长度X宽度) Workbench mounting dimension (length X width)	mm	1250X375	1250X375
移动工作台最大承重 Maximum load-bearing capacity of mobile worktable	kg	1500	1500
机床总重量 Total weight	t	约12	约12
主机外型尺寸(长X宽X高) Main Machine Dimension	m	3.15X3.3X3.24	3.15X3.3X3.24

注:
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2. 外观防护分半防护、全防护, 用户可根据实际需要选择;
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