

YDB3132CNC 数控干式滚齿机



主要特点:

本机床是六轴数控干式滚齿机。

机床具有三个数控直线轴:径向进给轴(X轴);轴向进给轴(Z轴);切向运动轴(Y轴)。三个数控回转轴:工作台回转轴(C轴);滚刀主轴回转轴(B轴);刀架回转轴(A轴)。机床可实现四轴联动控制。

1、各轴均由独立的交流伺服电机直接控制,具有传动链短,传动刚性好,传动精度高等特性。工作台回转轴(C轴)和滚刀主轴回转轴(B轴)均由内藏式主轴电机直接驱动,实现零间隙传动,大大提高了主轴的驱动刚度和动态响应速度。

2、滚刀主轴(B轴)能实现1~2000RPM范围内无级调速,特别适用于多头滚刀高速高效干式滚齿加工。

3、主要导轨副均采用高精度、高刚度的滚柱直线导轨,传动刚性好,支承能力大,运动直线度高。

4、机床采用全数字控制。标准配置采用FANUC公司新型高性能0i-F系统。

5、机床可配置自动对齿装置,实现硬齿面刮削加工。

6、机床可配置自动上下料及倒棱去毛刺工位。

Main features:

This machine is a six-axis CNC dry gear hobbing machine.

This machine incorporates three CNC linear shafts: radial feeding shaft (X-axis), axial feeding shaft (Z-axis), tangential motion shaft (Y-axis). Three CNC rotating shafts: Worktable rotating shaft (C-axis), hobbing cutter spindle rotating shaft (B-axis), and toolpost rotating shaft (A-axis). This machine can realize the four-axis linkage control.

1. All shafts are directly controlled by independent AC servo motors, featuring short drive chain, good drive stiffness, and high drive accuracy. The worktable rotating spindle (C-axis) and the hobbing cutter rotating spindle (B-axis) are directly driven by built-in spindle motors to realize zero-clearance drive and remarkably improve the drive stiffness and dynamic response speed of spindle.

2. The hobbing cutter spindle (B-axis) can realize stepless speed change within the range of 1~2,000RPM, which is especially suitable for the high-speed high-efficiency dry-type gear hobbing with multi-head hobbing cutter.

3. All slideway pairs adopt the high-precision high-stiffness linear roller slideways, featuring good drive stiffness, high carrying capacity, and high motion linearity.

4. The all-digital control is applied for the machine. The standard model adopts FANUC new high-performance 0i-F system.

5. This machine can be installed with automatic tooth alignment device to realize the hobbing function for hard tooth faces.

6. This machine can be installed with automatic loading/unloading station and chamfering/deburring station.

机床主要参数： Machine main specification:

项目	Item	技术规格 Technical parameter	单位Unit
最大工件直径	Maximum workpiece diameter	φ320	mm
最大模数	Maximum modulus	6	mm
加工斜齿轮螺旋角(A轴)	Helical angle of machined helical gear (A-axis)	±45	°
可安装滚刀最大直径	Maximum diameter of installed hobbing cutter	φ130	mm
可安装滚刀最大长度	Maximum length of installed hobbing cutter	230	mm
滚刀最大轴向移动量(Y轴)	Maximum axial movement of hobbing cutter (Y-axis)	200	mm
滚刀中心到工作台中心水平距离(X轴)	Horizontal distance from center of hobbing cutter to center of worktable (X-axis)	50~250	mm
滚刀中心到工作台中心竖直距离(Z轴)	Vertical distance from center of hobbing cutter to surface of worktable (X-axis)	200~550	mm
滚齿尾架至滚齿工作台台面距离	Distance from hobbing tailstock to hobbing workbench face	414~914	mm
滚刀主轴转速范围(B轴)	Speed range of hobbing cutter spindle (B-axis)	1~2000	rpm
工作台转速范围(C轴)	Speed range of worktable (C-axis)	1~150(250)	rpm
径向快速移动速度(X轴)	Radial quick movement speed (X-axis)	10000	mm/min
切向运动速度(Y轴)	Tangential moving speed (Y-axis)	4000	mm/min
轴向快速移动速度(Z轴)	Axial quick movement speed (Z-axis)	10000	mm/min
数控系统	CNC system	FANUC OiF	
电机总功率	Motor total power	70	KW
主电机额定输出功率	Rated output power of main motor	33	KW
机床占地面积	Occupation area of machine	400×350×330	cm
机床净重	Net weight of machine	11000	Kg