

机床特点 | CHARACTERISTICS OF MACHINE TOOL

ZXK系列龙门铣床中心主要用于法兰盘、大型阀门、大型轴承盖、风力发电设备、管板、回转支撑、换热器和非标产品的加工。

结构特点:

1. 机床主体结构: 固定式床身、移动工作台、左右双立柱、固定式横梁。
2. 机床主要部件: 床身、工作台、立柱、横梁等, 全部采用HT250铸造工艺, 结构合理, 适用性强, 确保机床的长期运行精度和稳定性。
3. 传动: X、Y、Z轴伺服驱动, 滚珠丝杠导轨, 主电机用交流伺服控制, 运行平稳, 高速低速扭矩一样, 工作台、横梁导轨为线轨, 滑枕采用硬轨, 确保刚性。

ZXK series gantry milling and milling centers are mainly used for the processing of flange plates, large valves, large bearing seats, wind power generation equipment, turbine cover supports, heat exchangers and non-standard products.

- Structural performance:
1. Main structure of machine tool: fixed bed, mobile workbench, left and right double columns, fixed beam.
 2. The main parts of the machine tool: bed, workbench, column, beam, etc., all adopt HT250 casting process, with reasonable structure and strong rigidity, to ensure the long-term operation accuracy and stability of the machine tool.
 3. Drive: X, Y, Z axis servo drive, ball screw lead rail, main motor controlled by AC servo, running smoothly, high speed and low speed torque are the same, workbench, beam guide rail is linear rail, and ram is hard rail to ensure rigidity.



龙门加工中心

JMC1214 技术协议 | JMC1214 Technical Agreement

内容 CONTENT	名称 NAME	规格型号 SPECIFICATION
工作台 Workbench	工作台尺寸 Table size	1400mm X 900mm
	工作台最大承重 Maximum bearing capacity of workbench	3T
	X轴最大行程 X axis maximum stroke	1400 mm
加工范围 Processing range	Y轴最大行程 Maximum stroke of Y-axis	1200 mm
	Z轴最大行程 Maximum stroke of Z-axis	700 mm
	龙门宽度 Gantry width	1250 mm
主轴 Main spindle	转速范围 Speed range	8000 r/min
	主轴电机最大功率 Maximum power of spindle motor	11/15kw

内容 CONTENT	名称 NAME	规格型号 SPECIFICATION
主轴 Principal axis	主轴至台面最低/最高距离 Minimum/maximum distance from spindle to table top	130-730 mm
	主轴锥度 Spindle taper	BT40/中出水
伺服 Servo	三轴电机扭矩 Torque of three-axis motor	28/18/18NM
	进给 Feed	快速移动 Rapid movement
		最大切削速度 Maximum cutting speed
外形尺寸 Overall dimensions		3800-2550-3100

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标准配置 | STANDARD CONFIGURATION

序号 NO.	标准配置 STANDARD CONFIGURATION	规格名称 PART NAME	产地/品牌 ORIGIN/BRAND
1	控制系统 Control system	凯恩帝 Kangdi	北京凯恩帝 Beijing Kane Emperor
2	机械主轴 Mechanical spindle	皮带式BT40 带 type BT40	丹棱中心出水/选配 Danmeng center cooling/Optional
3	X轴滚珠螺杆 X-axis ball screw	R50-10/12 R50-10/12	台湾鼎汉北方轴山NMC Taiwan Dinghan/Borhan NMC
4	Y轴滚珠螺杆 Y-axis ball screw	R50-10/12 R50-10/12	台湾鼎汉北方轴山NMC Taiwan Dinghan/Borhan NMC
5	Z轴滚珠螺杆 Z-axis ball screw	R50-10/12 R50-10/12	台湾鼎汉北方轴山NMC Taiwan Dinghan/Borhan NMC
6	X轴线性导轨 X-axis linear guide rail	2-45 滚柱重载直线导轨 2-45 Heavy duty roller linear guide	台湾鼎汉 Dinghan, Taiwan
7	Y轴线性导轨 Y-axis linear guide rail	2-45 滚柱重载直线导轨 2-45 Heavy duty roller linear guide	台湾鼎汉 Dinghan, Taiwan
8	Z轴形滑动导轨 Z-axis sliding guide	硬轨 Rigid rail	日本/NSK Japan/NSK
9	角接触球轴承 Angular contact ball bearing		台湾/盈锡 Taiwan/Yingshi
10	螺杆预拉螺母 Screw pre-tension nut	YSR YSR	台湾/盈锡 Taiwan/Yingshi
11	集中式自动润滑系统 Centralized automatic lubrication system	音积式 Yonjishi	国产 domestic
12	Z轴平衡系统 Z-axis balancing system	液压平衡系统 Hydraulic balance system	历天 Litian/day
13	气动系统 Pneumatic system		台湾/亚德克 Taiwan/Yadeke
14	照明系统 Lighting	工作灯 Work light	市购 Market purchase
15	打刀缸 Tool cylinder	增压式 Supercharged	台湾/亚德克 Taiwan/Yadeke
16	电控箱散热环式交换器 Electric control box heat circulation exchanger		国产 domestic
17	内防护伸缩罩 Internal protective telescopic cover	铝箱式伸缩型 Aluminum telescopic type	炯泰 Jingtai
18	全封闭外罩 Fully enclosed enclosure	全封闭(灰色) Fully enclosed (gray color)	本厂 Our factory
19	排屑系统 Chipping system	双螺旋排屑器一链排 One chain of double spiral cutter	本厂/选配 Our factory/Optional
20	刀库 Tool magazine	24工位德速/选配 24 station/Deesu/Optional	24工位德速/选配 24 station/Deesu/Optional
21	高压过滤器 High pressure filtering device	20公斤/选配 20 kg/Optional	20公斤/选配 20 kg/Optional

※ 以上部件品牌如有更换保证同等档次品牌同等质量。 If the above component brands are replaced, the same quality of the same grade brand shall be guaranteed.

项目 ITEM	GMB1185	GMB1214	GMB1316
X轴行程(mm) X-axis travel (mm)	1100	1400	1700
Y轴行程(mm) Y-axis travel (mm)	850	1200	1300
Z轴行程(mm) Z-axis travel (mm)	600	700	700
龙门宽度(mm) Gantry width (mm)	850	1250	1300
主轴端面至工作台面距离(mm) Distance from spindle end face to work table (mm)	150-750	130-730	130-730
工作台尺寸(mm) Workbench size (mm)	1200*800	1400*900	1000*1600
工作台最大承重(T) Maximum loading capacity of workbench (T)	1	3	2
T型槽 (槽数-槽宽*间距) T-slot (slot number - slot width * spacing)	5-22*150	5-22*150	5-22*180
主轴转速(rpm) Spindle speed (rpm)	10000	8000	6000
主轴型式 Spindle type	皮带BT40-φ150 Belt BT40 - φ 150	皮带BT40-φ150 Belt BT40 - φ 150	皮带BT50-φ155 Belt BT50 - φ 155
主轴马达(KW) Spindle motor (KW)	7.5/11KW	11/15KW	15/18.5KW
XY/Z轴给进功率(NM) XYZ axis feed motor power (NM)	X:18NM Y:15NM Z:28NM	X:18NM Y:18NM Z:28NM	X:32NM Y:32NM Z:32NM
XY/Z轴导轨形式 XYZ axis guide rail form	H45线轨 (XY)/Z轴35线轨 H45 rail (XY)/Z-axis 35 rail	H45线轨 (XY)/Z轴硬轨 H45 line rail (XY)/Z-axis hard rail	H45线轨 (XY)/Z轴45线轨 H45 rail (XY)/Z-axis 45 rail
XY/Z轴快速移动速度(m/min) XYZ axis fast moving speed (m/min)	24/24/24	18/18/18	24/24/24
切削进给速度(mm/min) Cutting feed rate (mm/min)	5000	6000	6000
ATC形式 ATC form	伞式刀库 Umbrella magazine	圆盘刀库 Disc tool magazine	圆盘刀库 Disc tool magazine
刀库容量(PCS) Magazine capacity (PCS)	16	24	24
最大刀具直径(mm) Maximum tool diameter (mm)	φ90/φ160	φ115/φ225	φ115/φ225
最大刀具长度(mm) Maximum tool length (mm)	300	350	350
最大刀具重量(KG) Maximum tool weight (KG)	300	15	15
刀柄 Full tool	P40T-1(45°)	P40T-1(45°)	P50T-1(45°)
换刀时间(刀对刀)sec Tool change time (tool to tool) sec	2.5	2.5	2.5
定位精度(mm) Positioning accuracy (mm)	±0.005/300	±0.005/300	±0.005/300
重复定位精度(mm) Repetitive positioning accuracy (mm)	±0.008/±0.007/±0.005	±0.008/±0.007/±0.005	±0.008/±0.007/±0.005
机床重量(T) Machine weight (about) T	6	11	14.5

GMB2016	GMB2518	GMB3018	GMB4025
2200	2500	3050	4000
1600	1500	1800	2300
800	760	900	1000
1600	870	1200	1400
150-950	200-960	200-1050	400-1400
1400*2000	2700*1300	3100*1600	4000*1800
3.5	4	5	8
7-22*150	8*22*150	7*22*180	9*22*180
6000	6000	6000/8000	6000/8000
皮带BT50-φ155 Belt BT50 - φ 155	皮带BT50-φ155 Belt BT50 - φ 155	皮带BT50-φ155 Belt BT50 - φ 155	皮带BT50-φ155 Belt BT50 - φ 155
18.5/22KW	18.5/22KW	22KW	28KW
X:32NM Y:32NM Z:32NM	X:32NM Y:32NM Z:32NM	X:32NM Y:32NM Z:32NM	X:32NM Y:32NM Z:32NM
H45线轨 (XY)/Z轴45线轨 H45 rail (XY)/Z-axis 45 rail	H45线轨 (XY)/Z轴45线轨 H45 rail (XY)/Z-axis 45 rail	H45线轨 (XY)/Z轴45线轨 H45 rail (XY)/Z-axis 45 rail	H45线轨 (XY)/Z轴45线轨 H45 rail (XY)/Z-axis 45 rail
20/20/16	20/20/10	20/20/10	15/15/10
10000	10000	10000	10000
圆盘刀库 Disc tool magazine	圆盘刀库 Disc tool magazine	圆盘刀库 Disc tool magazine	圆盘刀库 Disc tool magazine
24	24	24	24
φ115/φ225	φ115/φ225	φ115/φ225	φ115/φ225
350	350	350	350
15	15	15	15
P50T-1(45°)	P50T-1(45°)	P50T-1(45°)	P50T-1(45°)
2.5	2.5	2.5	2.5
±0.005/300	±0.005/300	±0.005/300	±0.005/300
±0.008/±0.007/±0.005	±0.008/±0.007/±0.005	±0.008/±0.007/±0.005	±0.008/±0.007/±0.005
18	19	21	42

机床特点 | CHARACTERISTICS OF MACHINE TOOL

我公司生产的数控钻床具有以下特点:

1. 数控滑台钻前动力头, 可以控制孔深, 具有钻盲孔、扩孔、倒角功能;
2. 数控平面钻床在X、Y方向自动找点进行钻孔加工, 数控平面钻床四个加工位置, 1-2个液压夹钳, 能够装夹四组工件, 钻孔的同时可以装夹工件;
3. 数控平面钻床CNC、PLC控制, CRT显示;
4. 数控平面钻床编程软件基于WINDOWS平台, 带有CAD接口, 编辑快速方便, 按图形象直观;
5. 数控平面钻床自动排屑, 冷却液循环使用。

The CNC drilling machine produced by our company has the following characteristics:
 1. CNC sliding table drilling power head can control the hole depth and has the function of blind hole drilling, reaming and chamfering;
 2. CNC plane drilling machine automatically find points in X and Y directions for drilling;
 The CNC surface drilling machine has four processing positions and 1-2 hydraulic clamping plates, which can clamp four groups of workpieces, and can load and unload workpieces while drilling;
 3. CNC PLC control and CRT display of CNC surface drilling machine.
 The programming software of CNC plane drilling machine is based on the WINDOWS system, with CAD interface, which is fast and convenient for programming and editing for preview;
 4. NC surface drilling machine automatically removes chips and circulates coolant.



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关键组件品牌明细表 | BRAND LIST OF KEY COMPONENTS

项次 ITEM	项目 ITEM	品牌 BRAND	项次 ITEM	项目 ITEM	品牌 BRAND
1	控制器 controller	凯恩帝 Kainedi	9	主要电器组件 Main electrical components	施耐德电气 (法国) Schneider Electric (France)
2	主轴 principal axis	丹桂 Dan Gui	10	手轮 handwheel	欧姆龙 (日本) OMRON (Japan)
3	刀库(刀库支架) tool magazine (including tool magazine support)	德速 Desu	11	X/Y/Z轴轴承 X/Y/Z axis bearing	NTN (日本) NTN (Japan)
4	钣金 sheet metal	沈重重工 Shen Yi Heavy Industry	12	热交换器或空调 Heat exchanger or air conditioner	SKF (瑞典) SKF (Sweden)
5	五大铸件 Five major castings	沈重重工 Shen Yi Heavy Industry	13	中心出水高压过滤器 High pressure filtering device for central effluent	沈重重工 Shen Yi Heavy Industry
6	五大铸件加工 Five major castings processing	沈重重工 Shen Yi Heavy Industry			
7	X/Y/Z轴丝杠 X/Y/Z axis rail	上银 Shangyin			
8	X/Y/Z轴滚珠丝杠 X/Y/Z axis ball screw	上银 Shangyin			

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机床主要参数 | MAIN PARAMETERS OF MACHINE TOOL

	数控系统选配 CNC SYSTEM SELECTION	单位 UNIT	发那科OIMF-plus FANUC OIMF PLUS	
三轴行程 Three axis stroke	X轴行程 X-axis stroke	mm	800	
	Y轴行程 Y-axis stroke	mm	550	
	Z轴行程 Z-axis stroke	mm	550	
	主轴垂直工作台面 Spindle nose to worktable	mm	100-700	
工作台 workbench	工作台尺寸 Table size	mm	1000-550	
	T型槽数 (宽×槽数×间距) T-slot width (width × Number of slots × Spacing)	mm	18x5x80	
主轴中心出水 Spindle center water outlet	工作台最大荷重 Maximum load of workbench	kg	800(均匀载荷)	
	主轴转速 Spindle speed	rpm	8000	
进给 feed	快速位移 (X/Y/Z) Rapid displacement (X/Y/Z)	m/min	36x36x24	
	切削位移速度 Cutting displacement speed	m/min	50-8,000	
刀库 (刀臂式) Tool magazine (tool arm type)	刀具刀柄类型 Tool shape type		MASBT-40	
	刀具螺栓类型 Fastening bolt type		MASP40T-1 (45°)	
	刀具数量 Number of tools	set	24	
	最大刀径 Max. cutter diameter	mm	200	
	最大刀直径 Max. cutter diameter	mm	φ200 (隔空刀)	
	刀具重量 Tool weight	kg	7	
	选刀方式 Tool selection mode		任意式	
	换刀时间 Tool change time	sec	T-T: 2.5	
	主轴电机功率及扭矩 Spindle motor power and torque	主轴电机功率 (连续/30分钟) Spindle motor power (continuous/30 minutes)	kW	(额定) 7.5/11(最大)
		输出扭矩 Output torque	NM	(额定) 70(最大)
所需动力源 Power source required	耗电量 Power consumption	kVA	AC380V/50HZ	
	气压 Pressure	MPa	0.45-0.6	
机轴尺寸及重量 Machine size and weight	工作压力 Working pressure	MPa	0.45-0.6	
	净重 Net weight	kg/cm ²	6	
	占地面积 (长度×宽度) Floor area (length × Width)	mm	2600	
	毛重 Gross weight	mm	2800x2600	
精度 Accuracy	定位精度 Positioning accuracy	mm	±0.007	
	重复精度 Repeatability accuracy	mm	±0.004	

机床主要参数 | MAIN PARAMETERS OF MACHINE TOOL

项目 ITEM	单位 UNIT	VMC640	VMC650	VMC850
X轴行程 X-axis travel	mm	640	650	800
Y轴行程 Travel Y-axis	mm	360	400	500
Z轴行程 Z-axis travel	mm	450	500	500
工作台尺寸 Table size	mm	800x300	900x400	1000x500
工作台最大承重 Maximum bearing capacity of workbench	kg	200	400	500
T型槽(槽数X宽度X间距) T-slot (slot number X width X spacing)	mm	3x16x80	3x18x110	5x18x90
主轴锥孔 Spindle taper hole		BT40	BT40	BT40
主轴功率 Spindle power	KW	3.7	5.5/7.5	7.5/11
主轴最大转速 Maximum spindle speed	rpm	8000	8000	8000
快速移动(X/Y) Quick Move (X/Y)	m/min	48/48/36	48/48/36	48/48/48
切削进给 Cutting feed	mm/min	1-8000	1-8000	1-8000
主轴鼻端至工作台面距离 Distance from nose end of main shaft to work table	mm	70/520	120/620	130-630
主轴中心至立柱导轨面距离 Distance from spindle center to column guide rail surface	mm	380	481	525
最大刀具直径(相邻空刀) Maximum tool diameter (adjacent empty tool)	mm	Φ90	Φ90	Φ78/Φ120
最大刀具长度 Maximum tool length	mm	300	300	300
最大刀具重量 Maximum tool weight	kg	5	8	8
定位精度 Positioning accuracy	mm	±0.008	±0.008	±0.0075
重复定位精度 Repeat positioning accuracy	mm	±0.005	±0.005	±0.005
机床重量 Machine weight	kg	3000	4000	4800
外形尺寸 Overall dimension	mm	2200x1800x2260	2300x1950x2450	2600x2300x2800

机床主要参数 | MAIN PARAMETERS OF MACHINE TOOL

VMC855	VMC1160	VMC1165	VMC1270	VMC1370
800	1100	1100	1200	1300
550/600	600	650	700	700
550/580	600	600	600	700
1000x550	1200x600	1200x600	1300x700	1360x700
600	1000	1200	1200	1400
5x18x100	5x18x125	5x18x125	5x18x125	5x22x140
BT40	BT40	BT40	BT50/BT40	BT50/BT40
7.5/11	11/15	11/15	11/15	15/18.5
8000	8000	8000	8000	8000
48/48/48	36/36/24	24/24/20	24/24/12	24/24/12
1-8000	1-8000	1-5000	1-5000	1-5000
130-680	140-740	120-720	140-740	160-860
590	650	650	780	780
Φ78/Φ120	Φ78/Φ120	Φ78/Φ120	Φ112/Φ200	Φ112/Φ200
300	300	300	300	300
8	8	8	18	18
±0.0075	±0.0075	±0.0075	±0.0075	±0.0075
±0.005	±0.005	±0.005	±0.005	±0.005
5000	7000	7500	9500	10000
2900x2400x2800	3400x2480x2960	3680x2480x2700	3400x2480x2960	3870x3165x2920

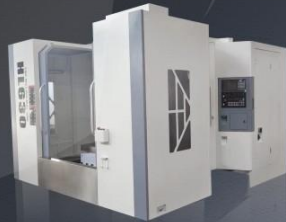
机床概述 | MACHINE TOOL OVERVIEW

数控机床是数字控制机床 (Computer numerical control machine tools) 的简称。是一种装有程序控制系统的自动化机床。该控制系统能够逻辑地处理具有控制编码或其他符号指令规定的程序，并将其译码，用现代化的数字表示，通过信息载体输入数控装置。经运算处理后由数控装置发出各种控制信号，控制机床的动作，按图纸要求的形状和尺寸，自动地将零件加工出来。

CNC machine tool is the abbreviation of Computer numerical control machine tools. It is an automatic machine tool equipped with a program control system. The control system can logically process the program specified by the control code or other symbolic instructions, decode it, express it with coded numbers, and input it into the numerical control device through the information carrier. After calculation and processing, the numerical control device sends out various control signals to control the action of the machine tool, and automatically processes the parts according to the shape and size required by the drawing.



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机床主要参数 | MAIN PARAMETERS OF MACHINE TOOL

项目 ITEM	单位 UNIT	HMC500	HMC630	HMC1075	HMC1290	HMC1814
工作台尺寸(长X宽) Working table size (length x width)	mm	500x500	630x630	1300x600	700x1360	2000x900
工作台左右行程(X轴) Left and right travel of workbench (X-axis)	mm	800	1100	1000	1200	1800
工作台前后行程(Z轴) Front and rear travel of workbench (Z-axis)	mm	800	1000	600	700	900
主轴箱上下行程(Y轴) Up-down travel of headstock (Y-axis)	mm	800	900	750	800	1280
主轴端面至工作台中心距离 Distance from spindle end face to workbench center	mm	220-1020	200-1200	50-650	180-880	200-1100
主轴端中心至工作面距离 Distance from spindle end center to work table	mm	0-800	0-900	60-810	140-940	140-1420
主轴锥孔锥度号 Spindle taper hole dimension number	mm	ISO50	ISO50	ISO50	ISO50	ISO50
主轴转速范围 Spindle speed range	rpm	50-6000	50-6000	50-6000	50-6000	50-6000
快速移动速度(X, Y, Z) Fast moving speed (X, Y, Z)	m/min	24/24/22	36/36/30	24/24/24	20/12/20	24/24/24
转台最大速度 Maximum speed of turntable	mm	10	10	10	10	10
直线运动坐标的定位精度 Positioning accuracy of linear motion coordinates	mm	0.012	0.012	0.005	0.005	0.005
直线运动坐标的重复定位精度 Repetitive positioning accuracy of linear motion coordinates	mm	0.008	0.008	0.003	0.003	0.003
刀库容量 Magazine capacity	把	24	24	24	24	24
换刀时间 Tool change time	s	2.5	2.5	2.5	2.5	2.5
刀具最大重量 Maximum tool weight	kg	18	18	18	18	18
刀具最大直径 Maximum tool diameter	mm	112	112	112	112	112
刀具最大长度 Maximum tool length	mm	320	320	320	320	320
主电机功率 Main motor power	kw	15/18.5	15/18	7.5/11	15/18.5	15/18.5
主轴最大扭矩 Maximum torque of main shaft	N.m	141	141	141	141	141
机床外形尺寸(长X宽X高) Overall dimension of machine tool (length X width X height)	cm	567x538x371	380x270x275	440x350x320	440x350x320	587x464x365