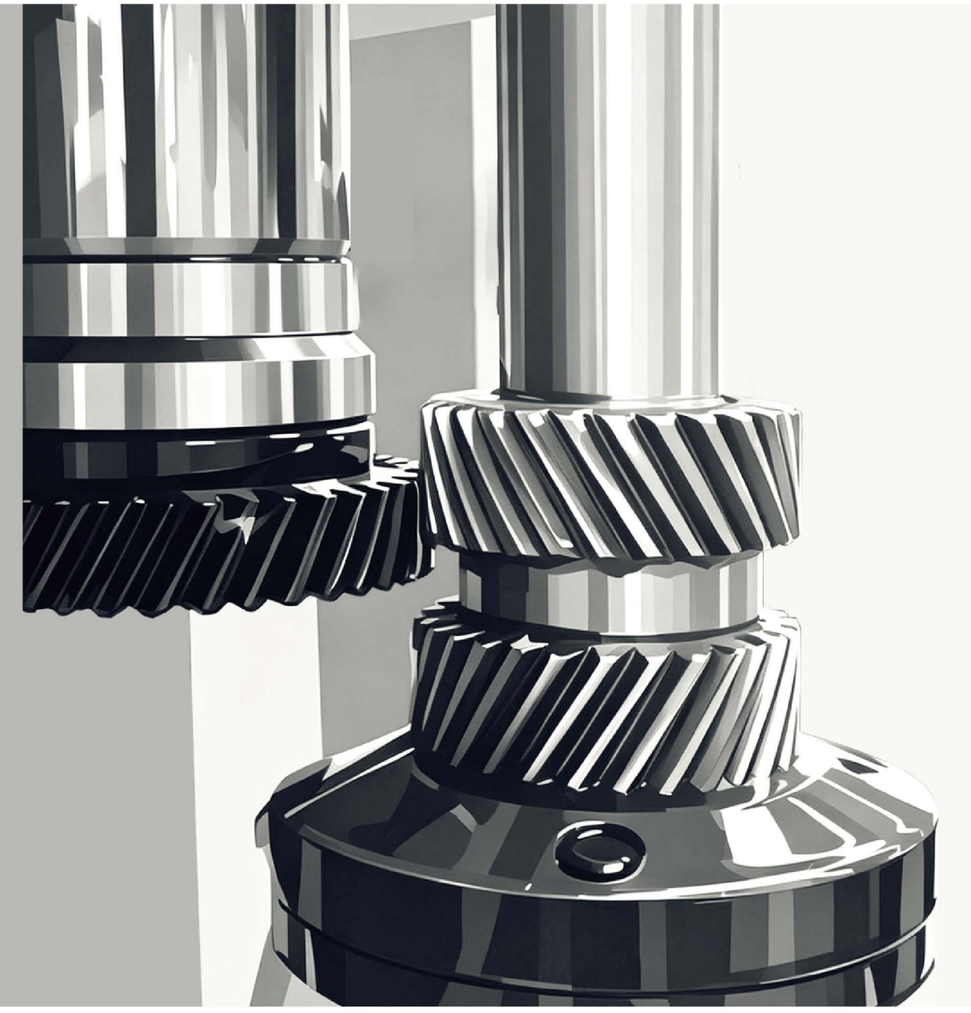
品格 · 品质 · 品位



插齿机

CNC GEAR SHAPING MACHINE

CJMT 长机科技

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中小型插齿机
CNC Small & Medium Gear Shaping Machine

产品介绍
Product Introduction

YK51 系列中小型插齿机适用于加工各类盘齿、轴齿及斜齿等零件，适用于仪表、医疗、液压、农业、汽车、摩配、工程机械、矿山机械、风电等行业的大批量生产使用，也适用于单件或小批量的加工。其中 YKT 系列提拉式插齿机特别适用于深孔内齿及具有特殊要求的双联或多联齿轮的加工。YKW 系列电子螺旋导轨插齿机特别适合于各种螺旋齿、深孔内齿及具有特殊要求的双联或多联齿轮的加工。

The YK51 series small and medium-sized gear shapers are suitable for machining various parts such as disc gears, shaft gears and helical gears. They are widely used in mass production in industries including instrumentation, medical equipment, hydraulics, agriculture, automobiles, motorcycle parts, construction machinery, mining machinery and wind power, as well as for single-piece or small-batch machining.Among them, the YKT series lifting-type gear shapers are especially suitable for machining deep-hole internal gears and double or multiple gears with special requirements.The YKW series gear shapers with electronic helical guides are particularly ideal for machining various helical gears, deep-hole internal gears, and double or multiple gears with special requirements.


荣誉证书
宜昌长机科技有限责任公司
你单位参展展品YKT5150提拉式数控插齿机荣获中国数控机床展览会CCMT2010春燕奖，特颁发荣誉证书。
中国机床工具工业协会
二〇一〇年四月

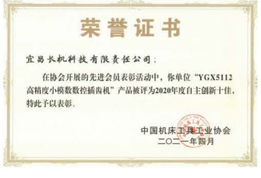

荣誉证书
宜昌长机科技有限责任公司
在开展先进会员表彰活动中，你单位“YK5150D数控插齿机”被评为2013年度产品质量十佳，特此予以表彰。
中国机床工具工业协会
二〇一四年二月


荣誉证书
宜昌长机科技有限责任公司
在开展先进会员表彰活动中，你单位“YKS5120 数控插齿机”被评为2014年度产品质量十佳，特此予以表彰。
中国机床工具工业协会
二〇一五年四月


荣誉证书
宜昌长机科技有限责任公司
在开展先进会员表彰活动中，你单位“YKS5132 数控插齿机”产品被评为2015年度产品质量十佳，特此予以表彰。
中国机床工具工业协会
二〇一六年四月


荣誉证书
宜昌长机科技有限责任公司
你单位参展展品 YKG5112 小模数高精度数控插齿机 荣获中国数控机床展览会CCMT 2016春燕奖，特颁发荣誉证书。
中国机床工具工业协会
二〇一六年四月


荣誉证书
宜昌长机科技有限责任公司
在开展先进会员表彰活动中，你单位“YKS180 数控插齿机”产品被评为2016年度产品质量十佳，特此予以表彰。
中国机床工具工业协会
二〇一七年四月


荣誉证书
宜昌长机科技有限责任公司：
在协会开展的先进会员表彰活动中，你单位“YGX5112 高精度小模数数控插齿机”产品被评为2020年度自主创新十佳，特此予以表彰。
中国机床工具工业协会
二〇二一年四月


荣誉证书
宜昌长机科技有限责任公司：
在协会开展的机床工具行业自主创新和产品质量调研工作中，你单位“YKW5165A 数控万能插齿机”被评为2024年度自主创新十佳，特此予以表彰。
中国机床工具工业协会
二〇二五年四月

重点参数
Key parameters

提拉式插齿机 Lifting Type Gear Shaping Machine　　电子螺旋导轨插齿机 Gear Shaping Machine with Electronic Helical Guideway

名称 Description		型号 Type											
		YGX5112 YGX5112A	YKG5132J YKGD5132J	YKH5132H YKHD5132H	YKT5132B	YKW5132A YKW5132B	YK5150F	YK5150J	YKT5150D	YKW5165A	YK5180E	YKT5180D	YKW5180A
最大加工外齿直径 Max. external gear diameter	mm	120	320	320	320	320	500	500	500	650	800	800	800
最大加工内齿直径 Max. internal gear diameter	mm	100+D刀	220+D刀	220+D刀	220+D刀	220+D刀	600	600	600	800	1100	1100	1100
最大加工模数 Max. module	mm	2	6	8	8	8	10	10	10	12	12	12	12
最大加工齿宽 Max. face width	mm	30	90	90	90	100	200	200	250	200	250	250	200
插齿刀冲程长度 Max. stroke length	mm	40	100	100	100	120	220	220	270	230	270	270	230
插齿刀冲程速度 Stroke speed	str/min	125~500	150~1250	125~2000	125~1800	125~1250	40~600	40~600	40~600	40~600	40~600	40~600	40~600
插齿刀让刀量 Cutter relieving	mm	⩾0.3	⩾0.3	⩾0.3	⩾0.3	⩾0.3	⩾0.5	⩾0.5	⩾0.5	⩾0.5	⩾0.5	⩾0.5	⩾0.5
插齿刀行程位置调整量 Adjusting amount of stroke position	mm	20	30	30	/	/	50	50	/	/	50/0	/	/
插齿刀安装轴颈直径 Diameter of cutter neck	mm	/	31.743	31.743	31.743	31.743	44.443	44.443	44.443	31.743	44.443	44.443	31.743
刀轴直径 Spindle diameter	mm	65	85	85	85	85	120	120	120	100	120	120	120
工作台可倾斜角度 Sloping angle of worktable	°	0	0/±10	0/±10	0	0	0	0	0	0	0	0	0
工作台直径 Diameter of worktable	mm	240	325/300	420/325	420	420	700	700	700	700	900	900	900
工作台孔径 Diameter of worktable bore	mm	/	100/70	120/100	120	120	140	140	140	140	320	320	320
插齿刀轴心线至工作台轴心线距离 Axis distance spindle /worktable	mm	-50~150	-110~250	-110~250	-110~250	-110~265	-40~400	0~400	0~450	-40~450	0~730	-25~615	-40~650
刀轴端面至工作台面距离 Surface distance spindle /worktable	mm	160~220	340~470	140~270	185~635	115~535 180~600	285~555	255~525	15~835	370~1000	310~580	273~1093	300~930
刀架提拉行程 Axial slide travel of cutter head	mm	/	/	/	350	300	/	/	550	400	/	550	400
机床总功率 Total power	kW	约20	约25	约30	约30	约85	约35	约35	约35	约100	约35	约42	约100
任意螺旋角加工（⩽45°） Arbitrary helix angle machining (⩽ 45°)	●是(Y) ○否(N)	○	○	○	○	●	○	○	○	●	○	○	●

大型插齿机
CNC Large Gear Shaping Machine

产品介绍
Product Introduction

YK51 系列大型插齿机适用于工程机械、矿山机械、汽车、风电等制造业的各类盘齿、轴齿及斜齿等零件大批量生产使用，也适用于单件或小批量的加工。其中 YKY 系列液压冲程插齿机特别适合大模数大齿宽深孔内齿齿轮的加工。

The YK51 series large gear shapers are suitable for mass production of various disc gears, shaft gears, helical gears and other parts in engineering machinery, mining machinery, automotive, wind power and other manufacturing industries. They are also applicable to single-piece or small-batch machining. Among them, the YKY series hydraulic stroke gear shapers are especially suitable for machining internal gears with large module, large face width and deep holes.

重点参数
Key parameters

提拉式插齿机 Lifting Type Gear Shaping Machine　电子螺旋导轨插齿机 Gear Shaping Machine with Electronic Helical Guideway　液压冲程插齿机 Hydraulic Stroke Gear Shaping Machine

名称 Description		型号 Type											
		YK51125E	YKT51125C	YKW51125A	YK51160D	YKT51160C	YKY51160 YKY51160A	YKW51160	YKCW51160	YK51250E	YKY51250 YKY51250A	YKW51250	YK51350
最大加工外齿直径 Max. external gear diameter	mm	1250	1250	1250	1600	1600	1600	1600	1600	2500	2300	2500	3500
最大加工内齿直径 Max. internal gear diameter	mm	1600	1600	1600	2100	2100	2100	2100	2100	3000	2500	2500	4000
最大加工模数 Max. module	mm	16	12	20	16	16	20	20	20	25	25	20	30
最大加工齿宽 Max. face width	mm	300	250	350	300	350	750	350	420	400	750	420	500
插齿刀冲程长度 Max. Stroke length	mm	330	270	380	330	380	800	380	450	430	800	450	530
插齿刀冲程速度 Stroke speed	str/min	15~150	30~240	10~200	15~150	20~150	/	10~200	15~150	15~120	/	15~150	15~120
插齿刀最大切削速度 Max. cutting speed of cutter	str/min	/	/	/	/	/	25	/	/	/	25	/	/
插齿刀最大返回速度 Max. return speed of cutter	str/min	/	/	/	/	/	50	/	/	/	50	/	/
插齿刀让刀量 Cutter relieving	mm	⩾0.5	⩾0.5	⩾0.5	⩾0.5	⩾0.5	⩾0.5	⩾0.5	⩾0.5	⩾0.5	⩾0.5	⩾0.5	⩾0.5
插齿刀行程位置调整量 Adjusting amount of stroke position	mm	50	/	/	50	/	/	/	/	60	/	/	60
插齿刀安装轴颈直径 Diameter of cutter neck	mm	88.9/101.6	44.443	88.9	88.9/101.6	88.9	88.9/101.6	88.9	88.9	88.9/101.6	88.9/101.6	88.9	88.9/101.6
刀轴直径 Spindle diameter	mm	140	120	140	140	140	180	140	140	160	180	140	180
工作台直径 Diameter of worktable	mm	1300	1300	1300	1600	1600	1600	1600	1600	2100	2100	2100	3000
工作台孔径 Diameter of worktable bore	mm	300	300	300	300	300	300	300	300	500	500	500	600
插齿刀轴心线至工作台轴心线距离 Axis distance spindle /worktable	mm	0~800	0~800	0~800	0~1000	0~1000	0~1000	0~1000	0~1000	240~1500	70~1250	140~1400	750~2100
刀轴端面至工作台面距离 Surface distance spindle /worktable	mm	250~630	420~1190	435~1315	370~750	520~1400	350~1150	370~1250	300~1250	260~750	750~1550	265~1215	460~1050
刀架提拉行程 Axial slide travel of cutter head	mm	/	500	500	/	500	/	500	500	/	/	500	/
机床总功率 Total power	kW	约50	约50	约120	约50	约79	约80	约120	约120	约50	约80	约130	约52
任意螺旋角加工（⩽45°） Arbitrary helix angle machining (⩽ 45°)	●是(Y) ○否(N)	○	○	●	○	○	○	●	●	○	○	●	○

配置选项
Configuration Options

提拉式插齿机 Lifting Type Gear Shaping Machine　　电子螺旋导轨插齿机 Gear Shaping Machine with Electronic Helical Guideway

● 标配 ● Std.　○ 选配 ○ Opt.　— 无 —N/A

名称 Description / 型号 Type		YGX5112	YGX5112A	YKG5132J	YKH5132H	YKT5132B	YKW5132A	YKW5132B	YK5150F	YK5150J	YKT5150D	YKW5165A	YK5180E	YKT5180D	YKW5180A
数控系统 Numerical control system	Siemens 808D	—	—	○	—	—	—	—	—	●	—	—	—	—	—
	Siemens 828D	●	●	●	●	●	—	—	●	○	●	—	●	●	—
	Siemens ONE	—	—	—	—	—	●	●	—	—	—	●	—	—	●
主轴驱动方式 Spindle drive mode	变频电机 Variable frequency motor	●	●	○	○	○	—	—	○	○	○	—	○	○	—
	伺服电机 Servo motor	○	○	●	●	●	—	—	●	●	●	—	●	●	—
	力矩电机 Torque motor	—	—	—	—	—	●	●	—	—	—	●	—	—	●
	液压伺服 Hydraulic servo	—	—	—	—	—	—	—	—	—	—	—	—	—	—
刀杆类型 Tool holder type	标准接刀杆 Standard tool adapter	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	专用接刀杆 Special tool adapter	○	○	○	○	○	○	○	○	○	○	○	○	○	○
防护类型 Protection type	全防护罩 Fully enclosed	●	●	●	●	●	●	●	○	●	○	●	○	○	●
	半防护罩 Semi-enclosed	—	—	—	—	—	—	—	●	—	●	—	●	●	—
集成电气柜 Electrical cabinet		●	●	●	●	●	—	—	—	●	—	—	—	—	—
工作台直驱 Direct drive worktable		—	●	—	—	—	●	—	—	—	—	—	—	—	—
立柱加高垫 Column heightening pad		○	○	○	○	○	—	—	○	○	○	—	○	○	—
尾座 Tailstock		—	—	○	○	○	○	○	○	—	○	○	○	○	—
夹具 Fixture		○	○	○	○	○	○	○	○	○	○	○	○	○	○
刀具 Cutter		○	○	○	○	○	○	○	○	○	○	○	○	○	○
螺旋导轨 Helical guideway		—	—	○	○	○	—	—	○	○	○	—	○	○	—
大行程自动调整 Auto large-stroke adjustment		—	—	○	○	○	●	●	○	○	○	●	○	○	●
小行程自动调整 Auto small-stroke adjustment		—	—	○	○	○	—	—	○	○	—	—	○	—	—
自动上下料机构 Auto load/unload		—	—	○	○	○	○	○	○	○	○	—	○	○	—
去毛刺机构 Deburring mechanism		—	—	○	○	○	○	○	○	○	○	○	○	○	○
自动对齿机构 Auto gear alignment		—	—	○	○	○	○	○	○	○	○	○	○	○	○
内外齿自动转换 Auto internal/external gear change		—	—	—	—	—	—	—	●	●	●	●	●	●	●
伺服让刀 Servo tool retraction		—	—	—	—	—	●	●	—	—	—	●	—	—	●

提拉式插齿机 Lifting Type Gear Shaping Machine　　电子螺旋导轨插齿机 Gear Shaping Machine with Electronic Helical Guideway　　液压冲程插齿机 Hydraulic Stroke Gear Shaping Machine

● 标配 ● Std.　○ 选配 ○ Opt.　— 无 —N/A

名称 Description / 型号 Type		YK51125E	YKT51125C	YKW51125A	YK51160D	YKT51160C	YKY51160 YKY51160A	YKW51160	YKCW51160	YK51250E	YKY51250 YKY51250A	YKW51250	YK51350
数控系统 Numerical control system	Siemens 808D	—	—	—	—	—	—	—	—	—	—	—	—
	Siemens 828D	●	●	—	●	●	—	—	—	●	—	—	●
	Siemens ONE	—	○	●	—	○	●	●	●	—	●	●	—
主轴驱动方式 Spindle drive mode	变频电机 Variable frequency motor	●	○	—	●	○	—	—	—	●	—	—	●
	伺服电机 Servo motor	○	●	—	○	●	—	—	—	○	—	—	○
	力矩电机 Torque motor	—	—	●	—	—	—	●	●	—	—	●	—
	液压伺服 Hydraulic servo	—	—	—	—	—	●	—	—	—	●	—	—
刀杆类型 Tool holder type	标准接刀杆 Standard tool adapter	●	●	●	●	●	●	●	●	●	●	●	●
	专用接刀杆 Special tool adapter	○	○	○	○	○	○	○	○	○	○	○	○
防护类型 Protection type	全防护罩 Fully cover	○	○	○	○	○	○	○	○	○	○	○	○
	半防护罩 Semi cover	●	●	●	●	●	●	●	●	●	●	●	●
集成电气柜 Electrical cabinet		—	—	—	—	—	—	—	—	—	—	—	—
工作台直驱 Direct drive worktable		—	—	—	—	—	—	—	—	—	—	—	—
立柱加高垫 Column heightening pad		○	○	○	○	○	○	○	○	○	○	○	○
尾座 Tailstock		—	—	—	—	—	—	—	—	—	—	—	—
夹具 Fixture		○	○	○	○	○	○	○	○	○	○	○	○
刀具 Cutter		○	○	○	○	○	○	○	○	○	○	○	○
螺旋导轨 Helical guideway		—	—	—	—	—	—	—	—	—	—	—	—
大行程自动调整 Auto large-stroke adjustment		●	○	●	●	○	●	●	●	●	●	●	●
小行程自动调整 Auto small-stroke adjustment		●	○	—	●	○	●	—	—	●	●	—	●
自动上下料机构 Auto load/unload		—	—	—	—	—	—	—	—	—	—	—	—
去毛刺机构 Deburring mechanism		—	—	—	—	—	—	—	—	—	—	—	—
自动对齿机构 Auto gear alignment		—	—	—	—	—	—	—	—	—	—	—	—
内外齿自动转换 Auto internal/external gear change		—	○	●	—	○	●	●	●	—	●	●	—
伺服让刀 Servo tool retraction		—	○	●	—	○	●	●	●	—	●	●	—

注：本手册反映2026年4月产品参数及配置，公司保留对配置进行调整的权利，相关详情可咨询公司各区域销售代表。

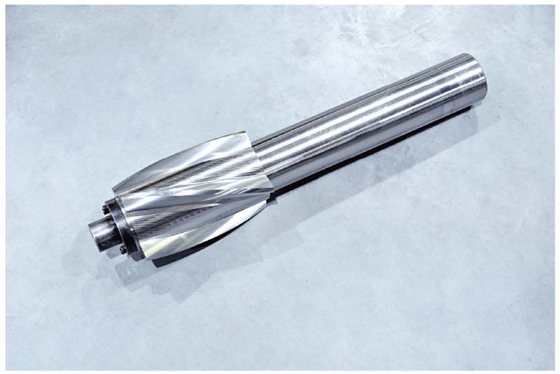
Note:This manual reflects product parameters and configurations as of April 2026. The company reserves the right to adjust configurations. For details, please consult our regional sales representatives.

核心技术
Core Technology

● 静压刀架体技术
Hydrostatic Tool Headstock Technology

静压刀架体与静压工作台技术通过高压油膜实现无接触支承。静压刀架体刚性高、振动小，保证刀具运动平稳，应用于全系列圆柱齿轮插齿机；静压工作台回转精度高、无爬行，分度精准，采用卸荷装置实现自适应调节，应用于中大型插齿机、滚齿机、铣齿机等产品。该技术有效减少磨损、抑制振动，显著提升齿轮加工精度与表面质量，是高端精密齿轮机床的核心关键技术。

Hydrostatic slide body and hydrostatic worktable technologies achieve non-contact support through high-pressure oil films. The hydrostatic slide body features high rigidity and low vibration, ensuring stable tool movement, and is applied to the full range of cylindrical gear shaping machines. The hydrostatic worktable offers high rotary accuracy, no stick-slip motion, and precise indexing, with an unloading device enabling adaptive adjustment. It is used in medium and large-scale gear shaping machines, hobbing machines, gear milling machines and other models. These technologies effectively reduce wear and suppress vibration, significantly improving gear machining accuracy and surface quality, making them core key technologies for high-end precision gear machine tools.



● 干式切削技术
Dry Cutting Technology

采用插齿干切技术，无需切削液，绿色环保无污染，显著提升加工效率与精度，保证工件尺寸稳定性更优。整机采用不锈钢全覆盖结构，配合多点排屑口，干切排屑更顺畅，避免切屑堆积。同时优化散热设计，快速导出切削热量，有效降低铸件热变形，进一步保障加工精度与设备运行可靠性，整体实现高效、精密、绿色化加工。

Adopting dry-cut gear shaping technology, this machine eliminates the need for cutting fluid. It is environmentally friendly and pollution-free, significantly enhancing machining efficiency and precision while ensuring superior dimensional stability of the workpieces.The entire machine features a full-stainless-steel enclosed structure, equipped with multiple chip discharge ports. This design facilitates smoother chip evacuation in dry cutting conditions, effectively preventing chip accumulation. Meanwhile, the optimized thermal dissipation design rapidly conducts cutting heat, significantly reducing thermal deformation of the castings. This further guarantees machining precision and operational reliability of the equipment, ultimately achieving high-efficiency, precision, and green machining.

● 液压直驱控制技术
Hydraulic Direct-Drive Control Technology

液压直驱伺服控制技术整合液压与数控系统，提升响应速度和智能化，避免指令延迟导致的精度损失和过冲现象。通过优化高频换向比例伺服阀组控制原理，改进阀芯设计，采用多层先导级闭环控制，实现伺服油缸快速精准换向。该技术兼容制齿专家系统，支持智能管控，显著提升系统性能与稳定性。

Hydraulic Direct-Drive Servo Control Technology integrates hydraulic and CNC systems to improve response speed and intelligence, avoiding accuracy loss and overshoot caused by command delay. By optimizing the control principle of high-frequency switching proportional servo valve manifolds, improving the spool design, and adopting multi-stage pilot closed-loop control, rapid and precise switching of the servo cylinder is realized. This technology is compatible with the gear manufacturing expert system, supports intelligent management and control, and significantly improves system performance and stability.

● 一次装夹加工内外齿技术
Technology for Internal and External Gear Machining in One Clamping

一次装夹实现加工：自动调整让刀机构到内齿让刀方式，调用程序先加工内直齿。加工完成后刀具上停，刀具退出工件，让刀自动转换至外齿让刀位置，Z1 轴调整高度到外斜齿位置，调用程序加工外斜齿。实现一次装夹，加工内外齿。应用于 YKW 系列电子螺旋导轨机床。

Machining in a single clamping: The tool relieving mechanism is automatically adjusted to the internal gear relieving mode, and the program is called to machine internal spur gears first. After machining, the tool stops at the upper position and withdraws from the workpiece. The relieving mechanism automatically switches to the external gear relieving position. The Z1 axis adjusts to the height for external helical gears, and the program is called to machine external helical gears. This realizes machining of internal and external gears in a single clamping. It is applied to YKW series machine tools with electronic helical guideway.

● 大小行程自动调整技术
Automatic Large & Small Stroke Adjustment Technology

适配多品种齿轮快速换产，解决传统手动调参精度低、效率低的问题。该技术依托数控系统，结合伺服驱动与高精度检测，实现行程一键自动设定与补偿，调整精度达 0.01mm 级。集成行程极限与安全监测机制，实时反馈、补偿误差，有效防止过切与碰撞，减少磨损，提升效率与稳定性，是产品智能化的关键技术。

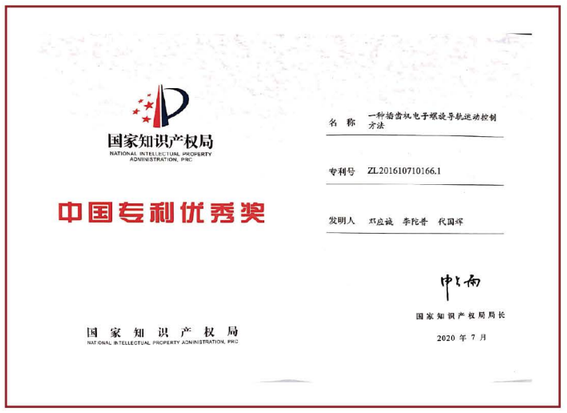
It adapts to the rapid production changeover of various gears and solves the problems of low precision and low efficiency in traditional manual parameter adjustment. Based on the CNC system, combined with servo drive and high-precision detection, this technology realizes one-key automatic setting and compensation of strokes, with adjustment accuracy up to 0.01 mm. It integrates stroke limits and safety monitoring mechanisms for real-time feedback and error compensation, effectively preventing overcutting and collisions, reducing wear, and improving efficiency and stability. It is a key technology for product intelligence.

核心技术
Core Technology

● 电子螺旋导轨技术
Electronic Helical Guideway Technology

电子螺旋导轨技术以数控系统、多轴联动与闭环控制替代传统机械导轨，实现高精度柔性螺旋运动控制，主要用于斜齿轮插齿加工，精度达 GB5 级，支持螺旋角校正、热处理变形补偿、齿形修形、在线检测。该技术国内首创，打破国外技术封锁，支撑风电、新能源汽车、机器人等高端零部件自主制造，是国产高端齿轮机床的核心突破。

Electronic Helical Guideway Technology replaces traditional mechanical guideways with CNC system, multi-axis linkage and closed-loop control to achieve high-precision flexible helical motion control. It is mainly used for helical gear shaping, with accuracy up to GB Grade 5. The technology supports helix angle correction, heat treatment deformation compensation, profile modification and on-machine inspection.Pioneered in China, this technology breaks foreign technological blockades, supports the independent manufacturing of high-end components for wind power, new energy vehicles, robotics and other fields, and represents a core breakthrough for domestic high-end gear machine tools.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中国专利优秀奖

名 称 一种插齿机电子螺旋导轨运动控制方法

专利号 ZL201610710166.1

发明人 [illegible]

国家知识产权局局长

2020 年 7 月

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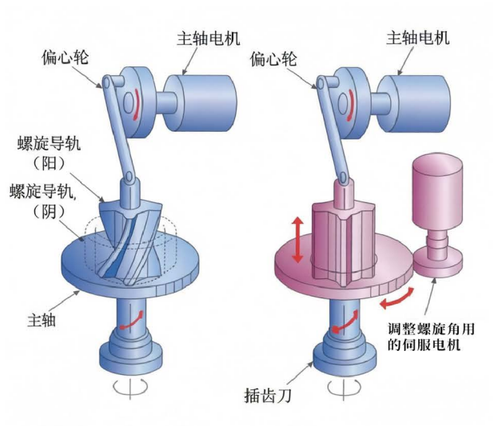

通过采用数控技术，省掉了螺旋导轨，缩短了更换工件时的准备时间。

By adopting CNC technology, the helical guideway is eliminated, shortening the setup time for workpiece changeover.

● 插齿主轴自动平衡技术
Automatic Balancing Technology for Gear Shaping Spindle

YKH5132H 小型高效数控插齿机配备全平衡驱动箱，降低机床震动和噪音，保证精度稳定性。

YKW 系列电子螺旋导轨插齿机通过曲柄盘偏心大小来调大行程，为了避免偏心引起震动，在偏心轴的一侧设置配重块，且该配重块能随机床行程的调整自动偏心位置，实现主运动自动平衡功能，满足高速旋转要求。

The YKH5132H small high-efficiency CNC gear shaping machine is equipped with a full-balance drive box, which reduces machine vibration and noise and ensures stable accuracy.

For the YKW series electronic helical guideway gear shaping machines, the stroke is adjusted by changing the eccentricity of the crank disc. To prevent vibration caused by eccentricity, a counterweight is installed on one side of the eccentric shaft. This counterweight can automatically adjust its eccentric position synchronously with the machine stroke adjustment, realizing the automatic main motion balancing function and meeting the requirements of high-speed rotation.

● 主轴直驱控制技术
Spindle Direct-Drive Control Technology

电子螺旋导轨插齿机采用主运动直驱与刀架旋转直驱技术，通过取消中间传动环节，有效提升传动刚性与动态响应性能，满足高精度齿轮加工要求。其中 YKW5132A 工作台配置力矩电机直驱结构，精度可达 GB4 级，为精密内齿、外齿及特殊齿形加工提供稳定可靠的精度保障。

The electronic helical guideway gear shaping machine adopts direct drive for main motion and direct drive for tool post rotation. By eliminating intermediate transmission components, it effectively improves transmission rigidity and dynamic response, meeting the requirements of high-precision gear machining. Among them, the YKW5132A model is equipped with a torque motor direct-drive structure for the worktable, achieving accuracy up to GB Grade 4, providing stable and reliable precision guarantee for machining precision internal gears, external gears and special tooth profiles.

● 内外齿让刀自动转换技术
Automatic Relief Conversion Technology for Internal & External Gears

中型插齿机，YKW 电子螺旋导轨插齿机上配备内外齿让刀自动转换功能。通过凸轮轴的位移，实现内外齿自动转换，操作更方便。

At present, the automatic internal and external gear shifting function is standard-equipped on the full series of YKW universal gear shapers .Automatic conversion between internal and external gears is realized through the displacement of the camshaft, making operation more convenient.

● 自动拉刀技术
Automatic Broaching Technology

可以提供规格从 320mm 到 650mm 插齿机的自动拉刀机构（HSK），配合辅助装刀机构，提高换型效率，方便用户使用。

We can provide automatic tool puller mechanisms (HSK) for gear shaping machines with specifications ranging from 320 mm to 650 mm.Paired with auxiliary tool loading mechanisms, they improve changeover efficiency and facilitate user operation.