Taikan

五轴联动铣车复合加工中心

FIVE AXIS MILLING AND TURNING MACHINE

FH 60P-C FH80P-C FH100P-C

Taikan

HIGH-END INTELLIGENT EQUIPMENT TURN-KEY SOLUTION SERVICE PROVIDER

SHENZHEN CREATE CENTURYAUTOMATIONTECHNOLOGYCO.LTD.
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COMPANY PROFILE

Founded 19 years ago

Create Century established in 2005

Ranking 191st

Shenzhen's Top 500 Enterprises in 2022

Top 100 businesses

Bao'an District, Shenzhen
Top 100 enterprises by added value
Top 100 enterprises by output value
Top 100 enterprises by tax contribution
Top 100 enterprises by innovation

4 R&D centers

Shenzhen R&D Center
Suzhou R&D Center
Shanghai R&D Center
Xi'an R&D Center

4 strategic partnership agencies

ONE STATION, ONE LAB, AND TWO CENTERS

Academician <Expert> Workstation of Shenzhen
Engineering Technology Research Center of Guangdong Province
Engineering Laboratory for Key Technologies in Smart Precision Machining
Enterprise Technology Center of Shenzhen

700+ core patents

Invention patents----------168
Utility model patents----------509
Design patents----------121
Software copyrights----------88

500+ R&D team members

The Company boasts a technical advisory board consisting of industry-leading technical experts from Mainland China, Taiwan, South Korea, Malaysia, Germany, and other regions, along with a dedicated R&D team of over 500 professionals

Guangdong Create Century Intelligent Equipment Group Co., Ltd. (Create Century for short; stock code: 300083) was publicly listed on the Shenzhen Stock Exchange in 2010, and underwent a transformation in 2016 to become an intelligent equipment Co., Ltd. in 2016. Create Century is a company that specializes in the research and development, production, sales, and service of high-end intelligent equipment. With nearly two decades of industry experience, it is capable of delivering top-quality equipment and comprehensive intelligent solutions to its customers. More importantly, Create Century stands out among similar domestic enterprises for its broad technological expertise and extensive product range.

Huzhou Industrial Park

Yibin Industrial Park

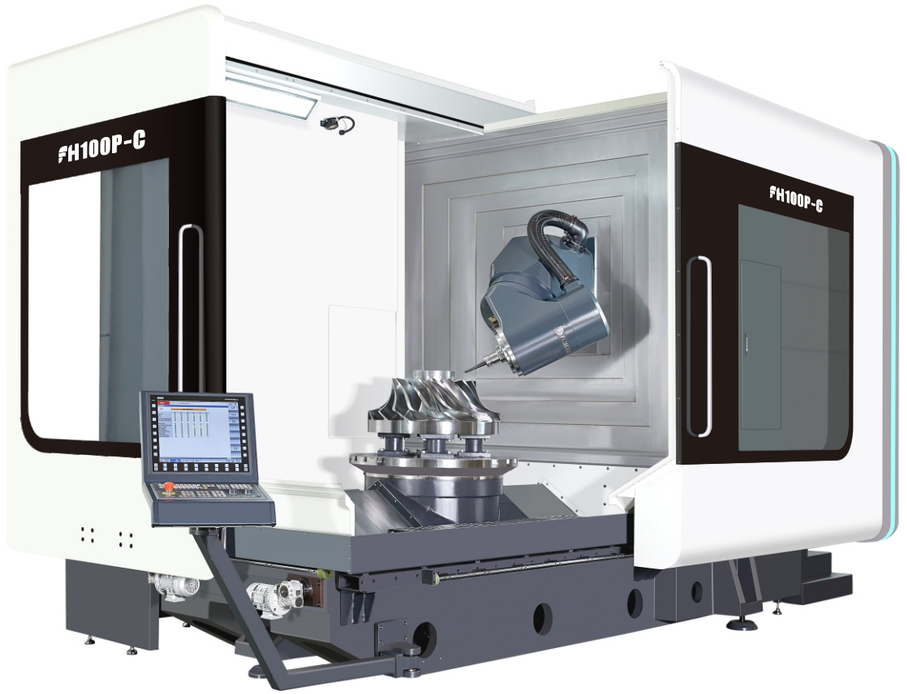
Dongguan Industrial Park

Suzhou Industrial Park

ELABORATELY CRAFTED EXTRAORDINARY ACHIEVEMENTS

MORE COMPACT STRUCTURE, SMALLER FOOTPRINT

The new Feihong 5-axis Milling-Turning Compound Machining Center makes every workpiece a masterpiece,with comprehensive cooling measures and a new improved spatial structure as well as a user-friendly operating system to all guarantee the highest precision and maximum performance!



HIGHLIGHTS

FH60P-C FH80P-C FH100P-C

- Fully optimized cooling system
- High rigidity guarantees high precision
- Higher performance guarantees perfect output
- Convenient and user-friendly operation
- Panoramic structure is easy to maintain
- Innovative tool management system
- Excellent price/performance ratio in the same specification
- B\C axis DD direct drive structure zero transmission chain transmission is more accurate
- X, Y, Z three axis screw hollow cooling system
- B-axis and C-axis high-precision absolute value rotary encoder measurement system
- X, Y, Z three linear axes are equipped with high-precision linear gratings

PRECISION

Coolant cooling of the Y-axis feed motor Comprehensive and effective cooling measures support a significantly improved temperature characteristic

PERFORMANCE

- HSKA63 electric spindle torque 132Nm power 34KW
- Workbench rigidity increased by 40%
- Rigid ball screw with a diameter of 50mm
- 45mm wide linear guide

EFFICIENCY

- Small footprint, extremely compact chain magazine for minimal setup times
- Higher machine availability
- Best serviceability and best ergonomics through unrestricted accessibility
- B-axis: Improved interference profile for higher rigidity!

NEW BENCHMARK IN FIVE-AXIS MACHINING
PROCESSING CHARACTERISTICS

The advanced and highly stable 5-axis machine mechanism, with a simple man-machine operation mode, focuses on improving accuracy, performance and efficiency by 30% each, achieving the highest machining performance and part accuracy under high dynamic conditions. From the hard-to-cut materials in the aviation industry to the highest surface quality requirements in the mold manufacturing industry, the Feihong five-axis simultaneous milling-turning compound machining center provides the best conditions.

Aerospace impeller processing

Feihong five-axis linkage turning and milling compound machining center can realize multi-form use: vertical and horizontal conversion, milling and turning, one-time clamping, multi-process and multi-angle processing and forming

45° inclined surface processing

Turning and milling compound one clamping

Helical rotor processing

Vertical turning function

PRECISION IS A NEVER-ENDING ATTITUDE
MACHINE STRUCTURE

The highly stable and high-precision structure also brings about the improvement of the overall rigidity, and the basic structure is further optimized by finite element calculation.e-axis simultaneous milling-turning compound machining center provides the best conditions.

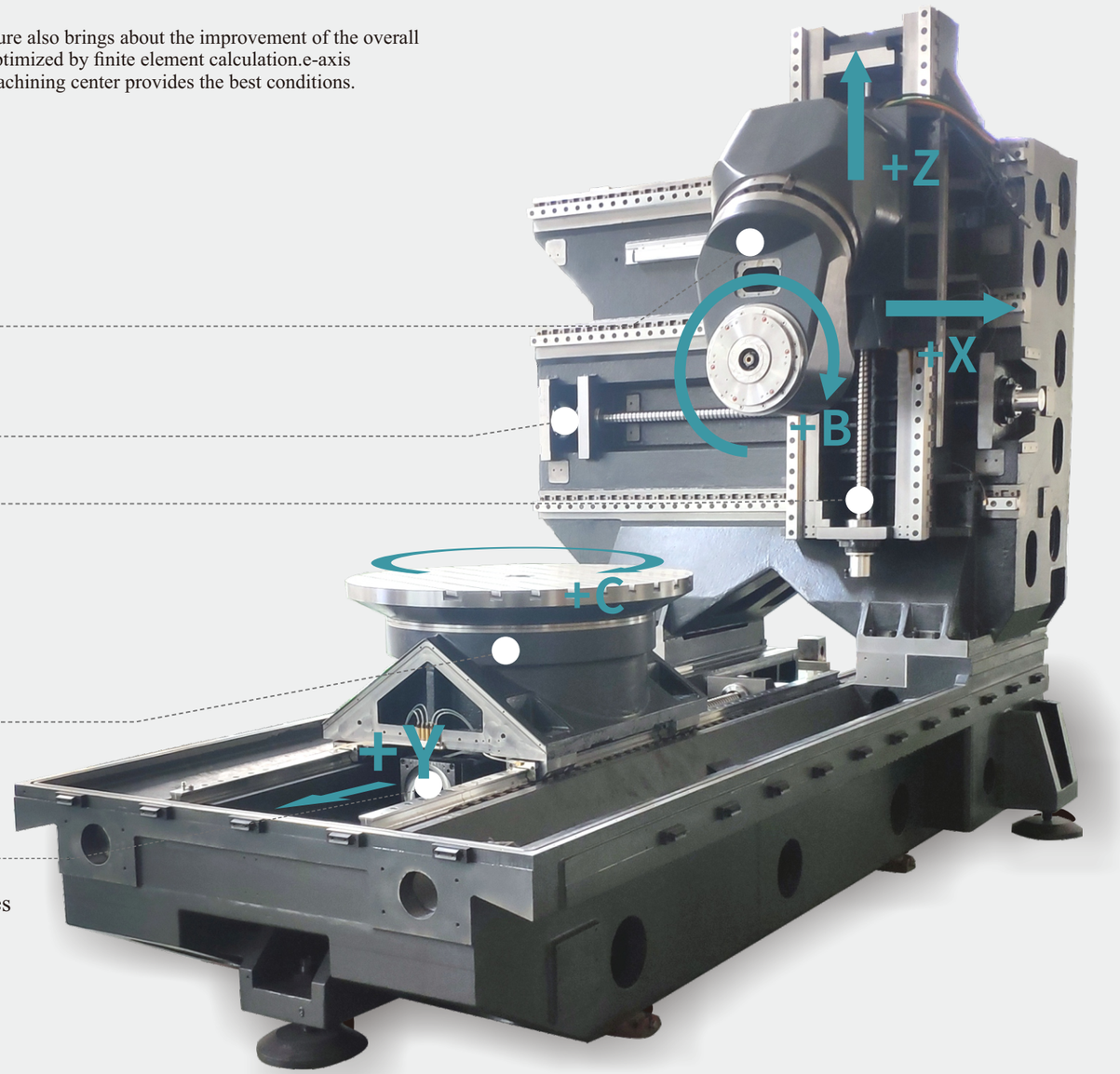
Headstock
Electric spindle
Headstock housing
B-axis motor

X-axis motor

X/Y/Z axis hollow ball screw

Rotary table
DD direct drive motor

Basic structure
Directly connected hollow ball screwHeavy-duty linear roller guides for X/Y/Z axes



Maximum rigidity guarantees maximum machining performance!

- Component structure optimization
- In all straight with ball screw drive
- 45/55mm wide linear guide on XYZ axis
- Larger YRT bearings on B and C axes
- Optimized 3-point support

EASY OPERATION AND PRECISE CONTROL
HUMANIZED DESIGN

The ergonomically designed operating table can meet the ideal requirements of different working environments according to different needs, realize close observation and monitoring of the whole process of processing, achieve the best operation performance, and ensure the accuracy of control.The built-in operating system enables continuous management, documentation and visualization of order, process and machine data, making operations easier and more focused on product production.

Ergonomic Design

Equipped with 19" multi-touch display
Multi-angle rotating lift and IPS full vision screen
Both traditional PC keyboard link host input mode

Unified
Unified operation interface for all models, no need for additional adaptation

Continuous
Unified management of tasks, processes and machine data

Compatible
Achieve compatibility, transfer and networking of files in multiple formats

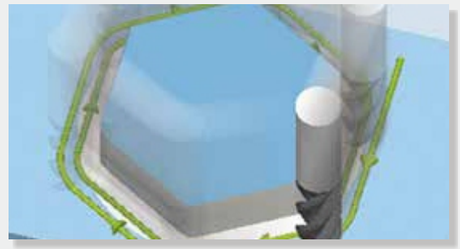
HIGH-END CNC SYSTEM FOR RELIABLE PROCESS FLOW AND HIGHEST PRECISION

Siemens 840Dsl controller with turning and milling programming environment
The easiest-to-use interactive programming system, high-performance processor and control unit

To transform engineering manufacturing capabilities into high-efficiency processing and achieve the highest precision and convenient operability of workpieces, intelligent CNC systems are indispensable. Feihong's five-axis linkage milling-turning compound machining center series comes standard with the world's leading supplier of CNC systems...-Siemens high-end five -axis linkage CNC system 840D, which improves the best machine tool CNC performance.

Animated elements for interactive input

SINUMERIK Operate
With animated elements, parameter entry is very easy and completely reinterprets graphical programming and operation.

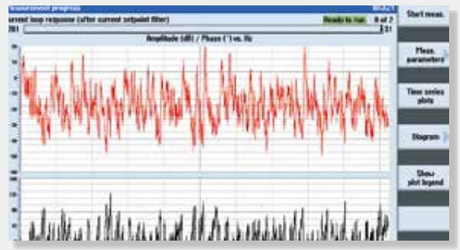


Smart Manual Mode

The HMI, using the intelligent JOG mode, supports all turning and milling setup functions graphically and interactively. The tool can be loaded very easily with just three clicks.

Built-in optimization and diagnostics

The Automatic Servo Tuning (AST) function automatically optimizes control parameters at the push of a button, ensuring that the machine maintains the highest accuracy over its entire life cycle.



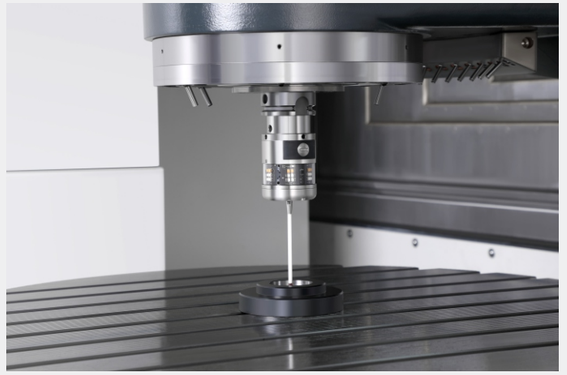
POWERFUL 5-AXIS MILLING HEAD

SIGNIFICANTLY IMPROVED AND IMPROVED INTERFERENCE PROFILE AND RIGIDITY

The B-axis with direct drive of DD motor improves rigidity through larger YRT bearing, which can realize high-torque cutting under the linkage state.

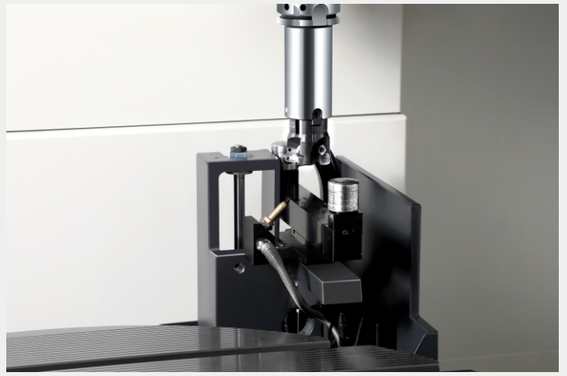
Turning and milling table

The DD motor directly drives the turning and milling worktable with zero transmission chain, with no gaps and high dynamics. It can complete the turning and milling processing in one clamping on one machine tool, and the high load capacity turntable can carry a maximum of 4T.



Triggered Optical Probe

Equipped with OMP60 ultra-small 3D trigger optical probe for on-machine workpiece alignment and inspection, saving 90% of on-machine assistance time and reducing scrap rate.



Laser tool setter

The non-contact laser tool setting instrument can be raised and lowered, the tool is automatically set on the machine, and the tool compensation is automatically updated to make the machining accuracy more accurate!

Five-Axis Milling And Turning Machine Specification Parameters

Item	FH60P-C	FH80P-C	FH100P-C
X/Y/Z axis travel	600×800×600mm	800×1050×800mm	1000×1150×1000mm
Distance from horizontal milling head center to working table	30~630mm	39~839mm	30~1030mm
Rotary table speed	350rpm	300rpm	250rpm
Working table size	φ660mm	φ880mm	φ1100mm
Max. table load	Milling 2000kg Turning 1000kg	Milling 3000kg Turning 1500kg	Milling 4000kg Turning 3000kg
Swing milling head (B axis)	Standard	Standard	Standard
Swing range (0=Vertical/180=Level)	-15°~ +180°	-15°~ +180°	-15°~ +180°
B axis rated speed	50rpm	50rpm	50rpm
Distance from vertical spindle nose to table	150~750mm	162~962mm	160~1160mm
Electric spindle Max. speed	12000rpm	12000rpm	10000rpm
Power （S1-100%/40%DC ）	34/42kW	34/42kW	42/58kW
Torque （S1-100%/40%DC ）	132/192Nm	132/192Nm	215/350Nm
Spindle taper	1:10 Taper	1:10 Taper	1:10 Taper
Tool interface	HSK-A63	HSK-A63	HSK-A100
Tool magazine capacity	40T	40T	40T
Max. tool diameter/length/weight	φ85mm/300mm/8kg	φ85mm/300mm/8kg	φ135mm/300mm/12kg
Tool changing time (Tool to Tool)	4s	4s	4s
Drilling (Normalizing medium carbon steel)	φ40mm	φ40mm	φ50mm
Tapping (Normalizing medium carbon steel)	M24	M24	M40
Rapid traverse	40m/min	40m/min	40m/min
X/Y/Z positioning accuracy	0.006mm	0.006mm	0.006mm
X/Y/Z repeat positioning accuracy	0.004mm	0.004mm	0.004mm
B/C positioning accuracy	8"	8"	8"
B/C repeat positioning accuracy	4"	4"	4"
Infrared probe	Renishaw OMP60	Renishaw OMP60	Renishaw OMP60
Tool setting gauge (Tool measuring in machining area)	Renishaw NC4F230	Renishaw NC4F230	Renishaw NC4F230
Machine height (Standard machine)	2985mm	3350mm	3650mm
Main body occupied area(L*W)	4300×2600mm	4800×2930mm	5170×3340mm
Tool magazine occupied area (L*W)	2100×1250mm	1710×1350mm	1915×1400mm
Chip conveyor occupied area (L*W)	3070×1065mm	3070×1065mm	3120×1065mm
Water tank occupied area(L*W)	1785×1355mm	1785×1355mm	1785×1355mm
Complete machine occupied area (excluding water tank) (L*W)	5200×3550mm	5610×3600mm	6000×3750mm
Machine weight	23000kg	30000kg	35000kg
Control system	Siemens ONE	Siemens ONE	Siemens ONE

Five-Axis Milling And Turning Machine Specification Parameters

Item	FH135P-C	FH170P-C	FH210P-C
X/Y/Z axis travel	1450×1450×1000mm	1700×1700×1100mm	2100×2100×1300mm
Distance from horizontal milling head center to working table	30~1030mm	130~1230mm	130~1430mm
Rotary table speed	53rpm	53rpm	30rpm
Working table size	ϕ1400mm	φ1700mm	φ1800mm
Max. table load	Milling 4000kg Turning 3000kg	Milling 8000kg Turning 5000kg	Milling 8000kg Turning 5000kg
Swing milling head (B axis)	Standard	Standard	Standard
Swing range (0=Vertical/180=Level)	-15°~ +180°	-15°~ +180°	-15°~ +180°
B axis rated speed	50rpm	60rpm	50rpm
Distance from vertical spindle nose to table	160~1160mm	236~1336mm	236~1536mm
Electric spindle Max. speed	10000rpm	10000rpm	10000rpm
Power （S1-100%/40%DC ）	42/58kW	48/71kW	48/71kW
Torque （S1-100%/40%DC ）	215/350Nm	300/452Nm	300/452Nm
Spindle taper	1:10 Taper	1:10 Taper	1:10 Taper
Tool interface	HSK100A	HSK100A	HSK100A
Tool magazine capacity	40T	40T	40T
Max. tool diameter/length/weight	ϕ135mm/300mm/12kg	φ135mm/300mm/12kg	φ135mm/300mm/12kg
Tool changing time (Tool to Tool)	4s	4s	4s
Drilling (Normalizing medium carbon steel)	ϕ50mm	φ50mm	φ50mm
Tapping (Normalizing medium carbon steel)	M40	M40	M40
Rapid traverse	40m/min	40m/min	40m/min
X/Y/Z positioning accuracy	0.006mm	0.012mm	0.012mm
X/Y/Z repeat positioning accuracy	0.004mm	0.01mm	0.01mm
B/C positioning accuracy			
B/C repeat positioning accuracy			
Infrared probe			
Tool setting gauge (Tool measuring in machining area)			
Machine height (Standard machine)	4150mm		
Main body occupied area(L*W)	5905 × 4100mm		
Tool magazine occupied area (L*W)	2200 × 1600mm		
Chip conveyor occupied area (L*W)	3700 × 1250mm		
Water tank occupied area(L*W)			
Complete machine occupied area (excluding water tank) (L*W)			
Machine weight	42000kg		
Control system	Siemens ONE	Siemens ONE	Siemens ONE

Reminder. The parameters listed in this book are for refcrence only, lf there are any design changes to the actual product.