



BEIJING JINGDIAO CNC MACHINING CENTER



INTRODUCTION

Jingdiao CNC Machining Center is a classic series with high market recognition. Since its launch in 2017, the sales value has been rising year by year, and a variety of typical configurations have been formed in many application field, which have helped the customers to realize the accurate, stable and efficient production of a variety of "difficult jobs".

Jingdiao CNC Machining Center adopts semi-closed-loop design, is mainly configured with medium type JD150S series precision motor spindle, coolant central through for option. It fits for the milling, drilling, tapping, grinding, boring and other composite machining. Tool magazine configuration can meet the needs of the composite machining of the maximum capacity of up to 48 tools. All series can match with the Jingdiao self-made DDR rotary table to achieve "3+1" or "3+2" processing, and realize multi-axis index or simultaneous processing. In order to quickly discharge the chips, all series were configured with the scraper type chip conveyor. The maximum processing range of this series is $1250 \times 850 \times 500\text{mm}$, the machining accuracy of all series can reach up to $10\text{-}20\mu\text{m}$. All series are compatible with Jingdiao automatic load unload system to realize the automatic processing.

At present, Jingdiao CNC Machining Centers have formed two mature series, "CTE" and "VTE", of which the "CTE" series is mainly used for the efficient machining of mold parts and the "VTE" series is mainly used for the machining of product-type parts.



Jingdiao CNC Machining Center CTE Series

CTE series is launched for the mold industry, the spindle is commonly used JD135SF and JD150SF, with better metal hard material (HRC>50) processing ability, stable 10-20 μ m machining accuracy; the maximum size of the workpiece can be processed for 1200*800*350mm. Over the years, this machine tool series has gained a good reputation in the finishing market for mold and die products.

CTE400T

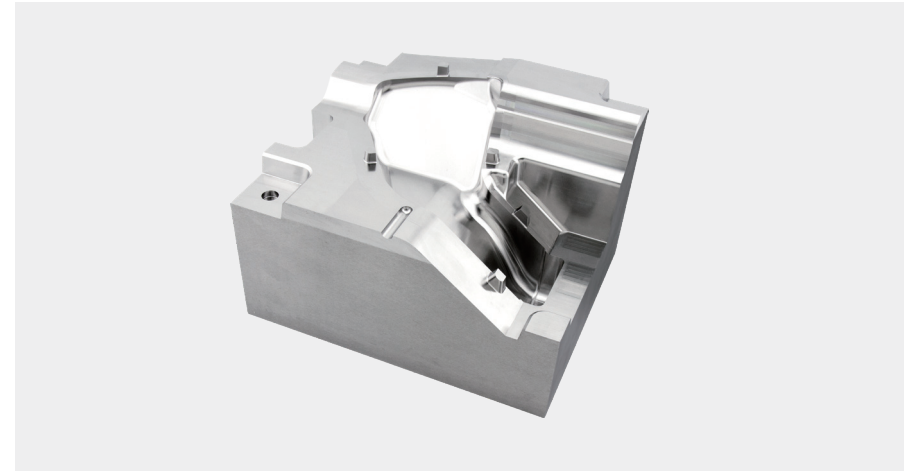
CTE400T can meet the compound processing requirements of precision milling, grinding, boring, drilling and tapping, the maximum 37-position tool magazine is configured to meet the utilization requirement of multiple tools' compound machining.



Deep Cavity Mold

High hardness material, complex mold shape, big steps, tool L/D ratio 6:1, uniform surface roughness.

Size: 239×199×156.7 mm **Material:** H13(HRC52)



Technical Specification

Machine Model	CTE400T	CTE400T
Working Travel (X/Y/Z)	400×400×300 mm	400×400×300 mm
Spindle	JD135S-24-BT30/FA	JD150S-20-HA50/C
Tool Holder	BT30	HSK-A50
Tool Magazine	Umbrella Type / Chain Type	Umbrella Type / Chain Type
Tool Magazine Capacity	18 / 37	16 / 37
Machine Tool Weight	5100 kg	5100 kg
Application Fields	Mold parts, precision parts processing	Mold parts, precision parts processing

CTE600T/CTE600TH

CTE600T has the compound machining abilities of milling, grinding, boring, drilling and tapping. A elevated beam model, CTE600TH, is available for option. The maximum height of workpiece can rise from 310mm to 520mm, and Z-axis travel can rise from 300mm to 450mm.



Column Heightening Type

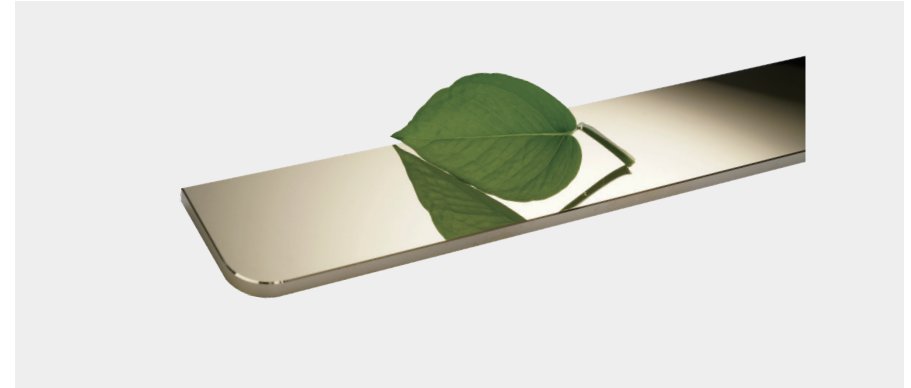
Technical Specification

Machine Model	CTE600T	CTE600TH
Working Travel (X/Y/Z)	600×500×300 mm	600×500×450 mm
Spindle	JD150S-20-HA50/C	JD150S-20-HA50/C
Tool Holder	HSK-A50	HSK-A50
Tool Magazine	Umbrella Type / Chain Type	Umbrella Type / Chain Type
Tool Magazine Capacity	18 / 37	18 / 37
Machine Tool Weight	6500 kg	6500 kg
Application Fields	Mold parts, precision parts processing	Mold deep cavity processing

Mirror Surface Test Piece

Plane, sidewall, chamfer roughness Sa0.012 μm.

Size: 652×67×8 mm **Material:** Aluminum/Copper



Deep Cavity Mold

High hardness material, complex mold shape, distinct height difference, tool L/D ratio 6:1, uniform surface roughness.

Size: 239×199×156.7 mm **Material:** H13(HRC52)



CTE800T / CTE800TH

CTE800T is configured with JD150S precision and high-speed motor spindle, the wide range of cutting ability made it suitable for 3-axis machining of hard metal (HRC>50) and stainless steel and other difficult-to-cut materials.

CTE800TH is the elevated beam model, can configure JD150S and JD180S precision and high speed motor spindles. It's sufficient feeding space and 450mm Z-axis travelling adapt it to machining deep cavity mold.



Elevated Column Type

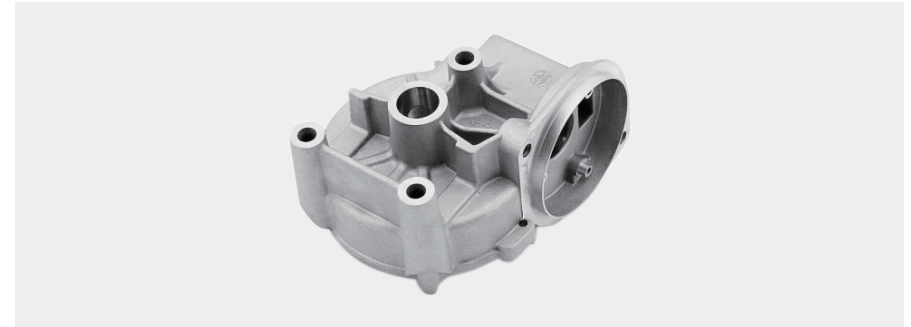
Technical Specification

Machine Model	CTE800T	CTE800TH	CTE800TH
Working Travel (X/Y/Z)	800×800×350 mm	800×800×450 mm	800×800×450 mm
Spindle	JD150S-20-HA50/C	JD150S-20-HA50/C	JD180S-15-HA63/B
Tool Holder	HSK-A50	HSK-A50	HSK-A63
Tool Magazine	Umbrella Type	Chain Type	Chain Type
Tool Magazine Capacity	18	37	37
Machine Tool Weight	9000 kg	9000 kg	9000 kg
Application Fields	Mold parts, precision parts processing	Mold deep cavity processing	Mold deep cavity processing

Wiper Die Casting

Milling, drilling, tapping, boring and other composite processing;
Assembly hole surface roughness Ra0.2 μm;
Assembly hole dimensional accuracy ±0.02 mm.

Size: 105×80×62 mm **Material:** ADC12

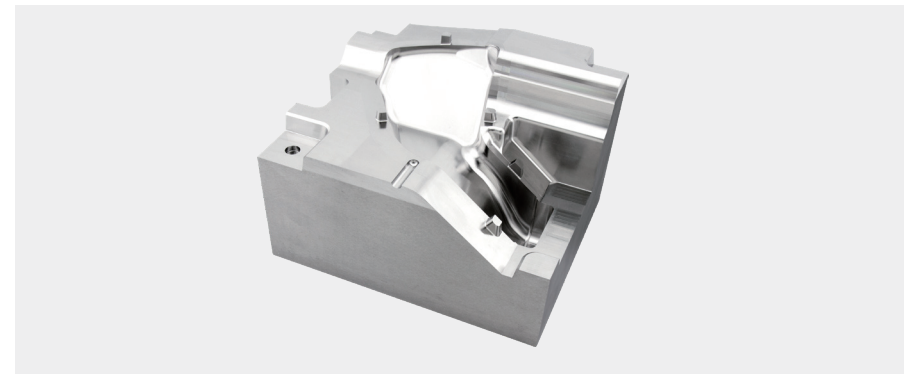


Deep Cavity Mold

High hardness material, complex mold shape, distinct height difference, tool L/D ratio 6:1, uniform surface roughness.

Size: 239×199×156.7 mm

Material: H13(HRC52)



CTE1200T / CTE1200TH

CTE1200T, big-sized precision CNC Machining Center, is configured with JD150S (HSK-A50) precision and high-speed motor spindle, and is adapted to strong cutting ability and good machining ability for hard metal (HRC>50).

CTE1200TH is the elevated beam model, can configure the JD150S and JD180S (HSK-A63) precision high-speed motor spindles, respectively. It's sufficient feeding space and 450mm Z-axis travel make it suitable for machining deep-cavity quenched steel molds, stainless steel and other hard cutting material.



Elevated Column Type

Technical Specification

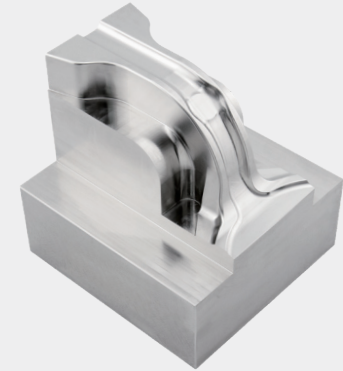
Machine Model	CTE1200T	CTE1200TH	CTE1200TH
Working Travel (X/Y/Z)	1200×800×350 mm	1200×800×450 mm	1200×800×450 mm
Spindle	JD150S-20-HA50/C	JD150S-20-HA50/C	JD180S-15-HA63/B
Tool Holder	HSK-A50	HSK-A50	HSK-A63
Tool Magazine	Umbrella Type	Chain Type	Chain Type
Tool Magazine Capacity	18	37	37
Machine Tool Weight	11000 kg	11000 kg	11000 kg
Application Fields	Mold parts, precision parts processing	Mold deep cavity processing	Mold deep cavity processing

High Core Stamping Mold

Surface roughness Ra0.4 μm.

Size: 122×130×73 mm

Material: Mold CR12mov(HRC60)



Deep Cavity Mold

Inner sidewall roughness Ra0.1 μm;

Contour deviation <13 μm.

Size: 125×80×60 mm

Material: S136 (HRC52)



Jingdiao CNC Machining Center

VTE series

VTE series is the single column structure machining center. It is provided with compound machining capability of milling, drilling, tapping, grinding and boring to meet the mass production requirements. It can stably realize 10~20 μ m machining accuracy and excellent surface roughness.

Among of them, VTE600T is mainly configured with JD150S (HSK-A50) motor spindle, and has excellent compound machining capability. It is widely used in the machining of various general-purpose parts. VTE600T_DZ has double Z-axis, double tool magazine, and optional double-station rotary table, all these configs provide it the distinct advantages in the high efficient machining.

VTE600T

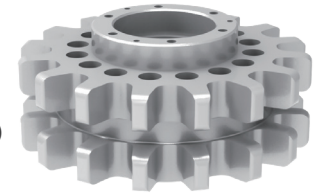
VTE600T is configured with Jingdiao self-made motor spindles, JD130S (BT30) or JD150S (HSK-A50). Two model configurations of VTE600T are available. It has the compound processing capability of milling, boring, drilling and tapping. Tool wear is stable and controllable in the process, and the machining accuracy can reach up to 15-20 μ m. It is ideal for complex machining on hard-to-cut materials, such as hardened steels, stainless steels, titanium alloys, high-temperature alloys, and non-ferrous metals.



Chain Sprocket

*Tool life time increased by 5 times,
tool cost reduced 80% .*

Size: $\Phi 160 \times 80$ mm **Material:** 45# Steel (HRC22)



Computerized Flat Knitting Machine Components

Mass processing time reduced from 140min to 78min.

Size: 353.8 \times 107 \times 5 mm (Triangle master) 42.9 \times 19.6 \times 8 mm (Flip needle block)

Material: 40Cr (HRC28)



Triangle master

Flip needle block

Mobile Phone Middle Frame

*Stainless steel frame milling and grinding compound processing;
Surface roughness Ra 0.2 μ m, stably realizing mass production.*

Size: 123.8 \times 59.3 \times 5.4 mm

Material: 316 Stainless steel



Technical Specification

Machine Model	VTE600T	VTE600T
Working Travel (X/Y/Z)	600 \times 400 \times 340 mm	600 \times 400 \times 340 mm
Spindle	JD130S-24-BT30/E	JD150S-20-HA50/C、 JD150SC-20-HA50/A
Tool Holder	BT30	HSK-A50
Tool Magazine	Disc-type	Disc-type
Tool Magazine Capacity	24	24
Machine Tool Weight	5300 kg	5800 kg
Application Fields	3C Parts, small hardware, auto parts processing	3C Parts, small hardware, auto parts processing

VTE600T_DZ

VTE600T_DZ can be configured with two kind of Jingdiao self-made motor spindle, JD130S (BT30) and JD150S (HSK-A50). It adopts double Z-axis and double C-axis structure and can perform 5-axis simultaneous machining. In addition, it has comprehensive machining capability for precision milling, boring, drilling and tapping.



Technical Specification

Machine Model	VTE600T_DZ	VTE600T_DZ
Working Travel (X/Y/Z/W)	600×400×330×330 mm	600×400×330×330 mm
Spindle	JD130S-24-BT30/E	JD150S-20-HA50/C JD150SC-20-HA50/A
Tool Holder	BT30	HSK-A50
Tool Magazine	Disc-type	Disc-type
Tool Magazine Capacity	2×24	2×24
Machine Tool Weight	5800 kg	6100 kg
Application Fields	3C Parts, small hardware, auto parts processing	3C Parts, small hardware, auto parts processing

Automotive Turbocharger Impeller

5-axis simultaneous machining by the VTE600T_DZ, the machining time for a single part is only 2min24s, blade profile deviation <math><0.05\text{ mm}</math>, balancing grade can reach G1.0, impeller surface roughness Ra 0.6 $\mu\text{m}</math>.$

Size: $\Phi 53.5 \times 30\text{ mm}$ **Material:** Aluminum alloy 7075

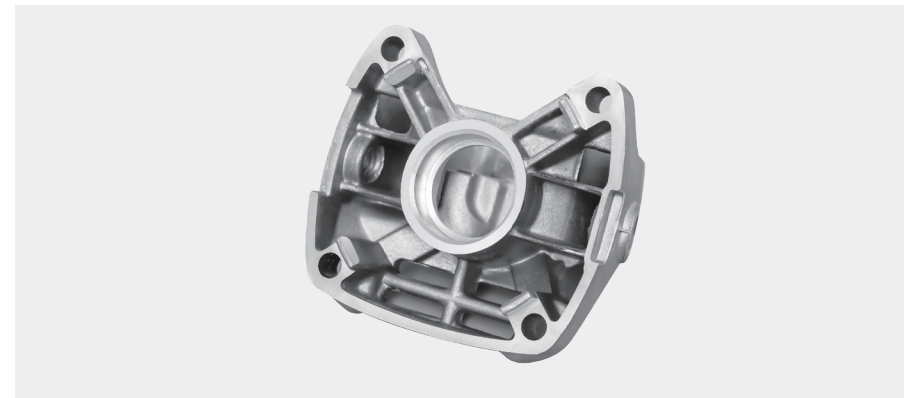


Angle Grinder Shell Die Casting

Completed two workpieces in a single work set up, processing time 2 minutes for each piece.

Size: 70.5×74.8×63.7 mm

Material: Aluminum casting (ADC12)



VTE700T

VTE700T adopts the Jingdiao patented mechanical structure, integrated column head and cross slide worktable, which makes it has excellent anti-vibration ability and rigidity in high efficient high volume processing. It has comprehensive machining capabilities of milling, drilling, tapping, boring, cycloidal milling and etc.



Technical Specification

Machine Model	VTE700T
Working Travel (X/Y/Z)	700×500×420 mm
Spindle	JD180S-15-HA63/B
Tool Holder	HSK-A63
Tool Magazine	Disc-type
Tool Magazine Capacity	24
Machine Tool Weight	7300 kg
Application Fields	High efficient high volume processing such as die castings parts, automotive parts, and structural parts machining

High-end Bicycle Shifting Shaft

The dimensional accuracy of the slot width of the shaft were stably controlled within -0.01~0mm, breaking the limit of ± 0.03 mm of the customer.

Size: $\Phi 13.7 \times 200$ mm

Material: 20CrMo (HRC17)

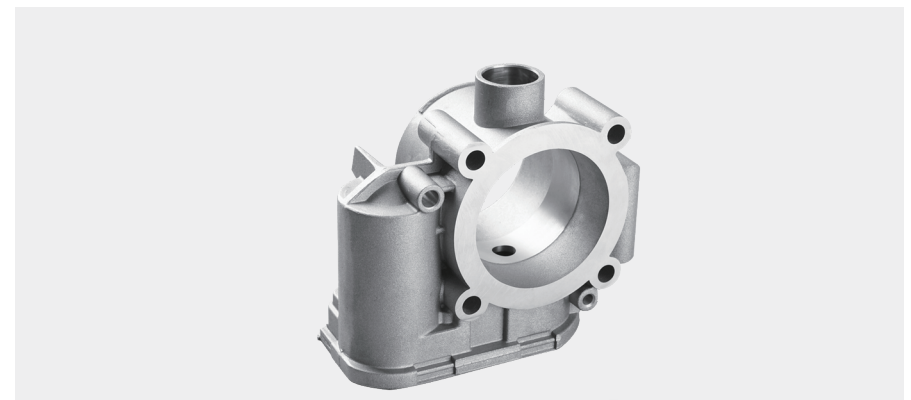


Pump Body Die Casting

8min to complete all process in a single work set up, Jingdiao DDR rotary table is available to form 3 + 2 index or simultaneous machining of milling, drilling, boring, reaming, and tapping; Supported by IMIM technology, the automatic work set up and automation working can be achieved stably.

Size: 169×131×87 mm

Material: Aluminum die casting (ADC12)





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About Jingdiao

