Desktop NC Ultra 2 Intro



Compared with the Pro, performance is increased by 20% and efficiency by 10%.

1. Overview

Ultra 2 is a high-performance desktop 5-axis CNC machine designed for creators, engineers, and businesses seeking precision manufacturing in a small footprint. Whether you are crafting intricate prototypes or high-quality production parts, Desktop NC delivers exceptional results every time*

Workflow: 1) CAD 2) CAM 3) Manufacturing

2. Feature

2.1. **High-Performance Spindle.** With a powerful 1500 W motor, it operates at a high speed of 60,000 RPM, efficiently water-cooled, and exhibits radial runout of 3-5μm.

2.2. **High-Precision Components.** It includes a harmonic motor for the rotational axis, a linear axis with a direct current servo motor, ball screws, and upper silver linear guides.

2.3. **Sheet Metal Casing.** Designed to be dustproof and noise-reducing, with waterproof treatment for critical components and equipped with a cutting fluid circulation system.

2.4. **Automatic Tool Change.** Designed with an automatic tool changer carousel offering 4 tool positions, enabling fully automated tool-changing operations.

2.5. **User-Friendly Operation.** Features automatic tool measurement and an electronic handwheel for simplified operation.

2.6. **Cost-Effective Manufacturing.**Ideal for processing aluminum alloy materials, offering a cost-effective solution.

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2.7. **Professional Technical Services**. Provides CAM programming support, simulation guidance, custom fixture design, and component upgrade services.

3. Specs

Machinery			
Packing Dimension	W87×D73×H105 cm	**Packaging Weight**	177 kg
Equipment Dimension	W80×D63×H85 cm	**Equipment Weight**	157 kg
Workbench Dimension	Φ100mm	**Workbench Max. Load**	5 kg
XYZ Effective Travel	X160×Y200×Z130 mm	**5-Axis Machining Accuracy**	5-Axis spatial accuracy<0.05mm
A&C Effective Travel	A：-30-120°,C：360°		
Principal Axis	Default 800 W 24000 rpm Water-cooled	**5-Axis Machining Range**	Cylinder:Φ150×H105 mm /Φ100×H120 mm Cube:W125×D125×H110 mm
5-Axis Machining Accuracy	Linear axis parallelism & perpendicularity 0.02 mm	**Protect**	Accordion dustproof Oil seal waterproof & dustproof.
3-Axis Machining Range	X150×Y190×Z125 mm	**Machining Speed**	4000mm / min Vary by material
Tool Diameter & Length	Fixed 4mm or 6 mm Tool Holder, Maximum Tool Length ≤ 60 mm 4-Tool Capacity	**A&C Axis**	1:80 20 Harmonic reducer,Return <1' 1N Servomotor Torque after reduction 50N
Part Fixtures	Steel fixture with reserved hole position Can add ER50 clip holder, 63,80 Chuck	**Frame**	Forced Parts: 45 # Quenched &Tempered Steel Others：Al6061-T6 Aviation Aluminum
Ball Screw	X&Z: PMI 1204 C6 Y: PMI 1604 C6	**Linear Guideway**	X&Z: Hiwin MGN12, Y: Hiwin MGN15
Work Material	Metal: Aluminum alloy,Copper alloy, Gold alloy,Silver alloy, * Steel, * Titanium alloy		Non-metal: Plastic, Wood, Wax, Jade, Glass, etc

Electrical			
Drive Motor	Synmatic 23-bit Optical Encoder EtherCAT Bus Absolute Servo Motors X-Axis: 400W Y & A-Axis: 400W with Brake Z & C-Axis: 200W	**Control System**	LNC 8250 Industrial Five-Axis Bus Offline Controller + 10.4" Screen Button Control Panel
Home Switch	Photoelectric Sensor	**Spindle Inverter**	2.2 kW, 1000 Hz
Input Voltage	220V 10A/ 110V 20A	**Tool Setter**	Contact force 1.5N Repeated tool setting accuracy 2um

Software			
Control Software	LNC	**Program Software**	PowerMill,Fusion360，NXUG，MasterCAM etc

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4. Default & Optional

4.1. Default Delivery List

Sort	Name	Description	PCS
Equipment	Main Unit	Desktop 5-axis milling machine	1
Material Fixture	A-Type Self-Centering Vise	Clamps for 8-55mm square materials	1
Tool Holder	ER11 Collet	ER11-4 & ER11-6	2
Tools	End Mills, Ball Mills	0.2mm End Mills (for engraving) × 10, 2, 4, 6mm End Mills × 2, R-Ball Mills × 2	18
	Hex Key Set	1.5-10mm, 9PCS	1
	Spindle Wrench Set	14 & 17mm open-end wrenches	2
Electrical	Power Box	Motor Control Inverter	1
	Power Cable	Equipment's total power supply	1
	USB Data Cable	Connects the computer to the host	1
	Electronic Handwheel	Axis movement control	1
Material	Substitute Wood Blocks	For practice	4

4.2. Optional

Sort	Name	Description	PCS	Price
Tool Holder	Main Spindle ER11 Collet	Complete set, 2~8mm	10	$25
Material Fixture	A-Type Self-Centering Vise	Clamping range 50-75mm	1	$30
	B-Type Larger Self-Centering Vise	Clamping range 0-100mm	1	$140
Square Material Fixture	Hand-Tightening 80 Chuck (4-Jaw)	Height: 48mm stroke, can clamp bars and square materials	1	$60
	Metalworking 80 Chuck (3-Jaw)	Height: 66mm stroke, better concentricity than four-jaw	1	$65
	ER40 Chuck (ER50, ER40 optional)	High concentricity, used with ER40 collet (clamp Φ4~30mm)	1	$40
Rod Material Fixture	ER40 Collet Set	6.8.10.12.15.18.20.25.28.30mm Collets (for the same diameter bars)	10	$65
	ER50 Chuck	Used with ER50 Collet(clamp Φ4-36mm)	1	$40
Auxiliary Unit	ATC	4-station, 1.8 kW , 60000 rpm spindle	1	$1099

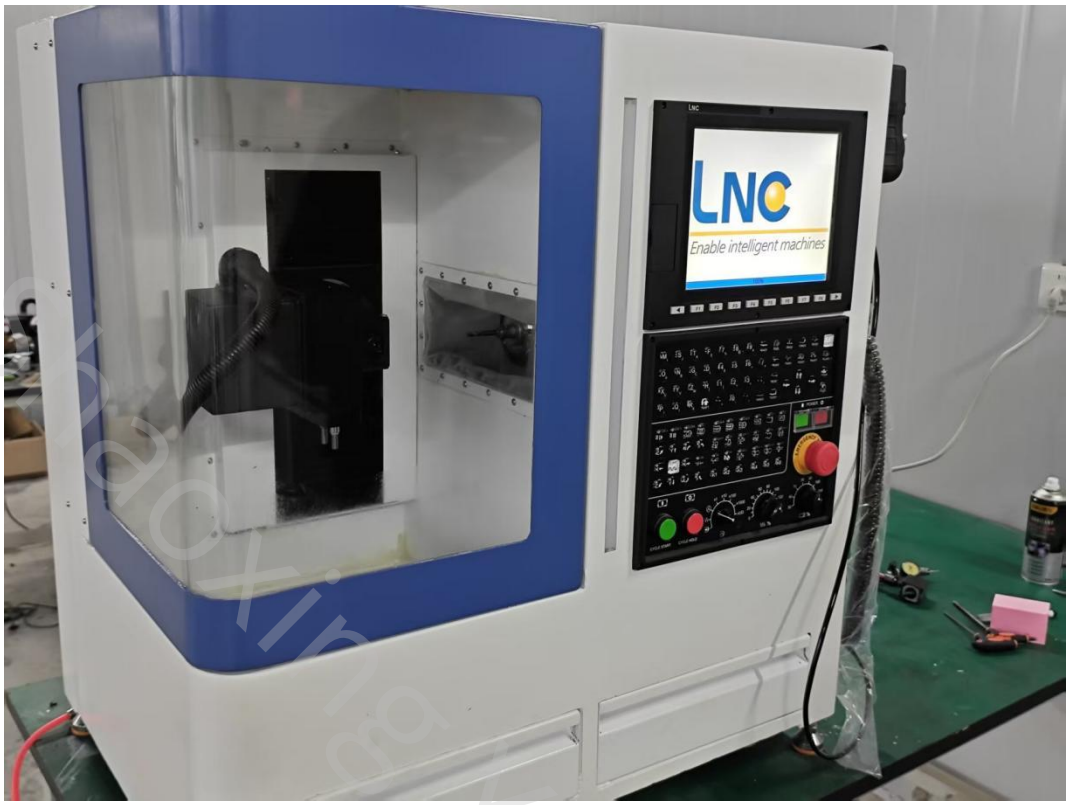
5. Warranty

5.1. 12-month warranty for quality problems caused by non-human factors

5.2. After the warranty period expires, parts will be replaced and repaired at cost price.

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6. Details

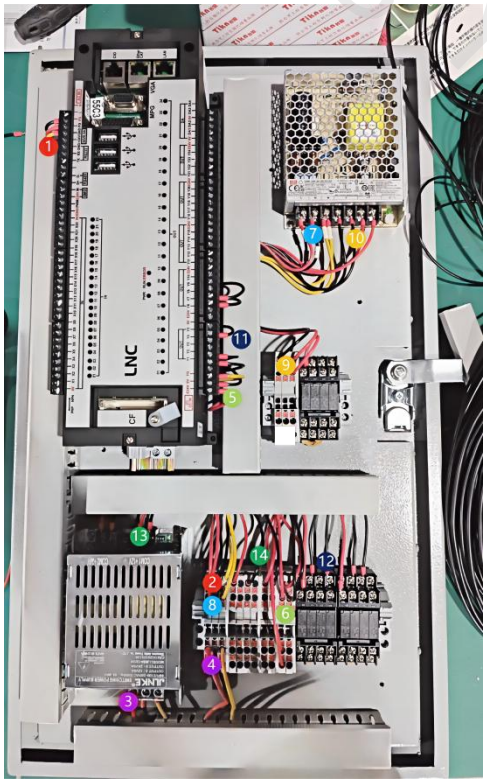


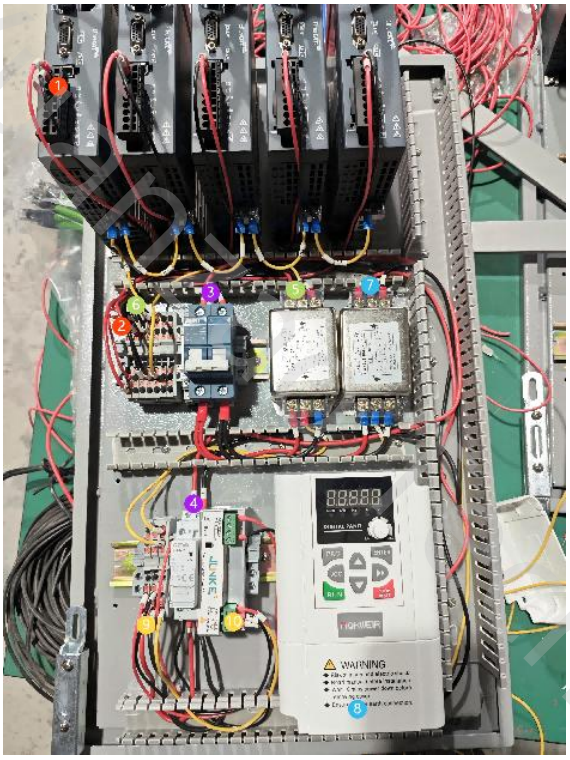









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