

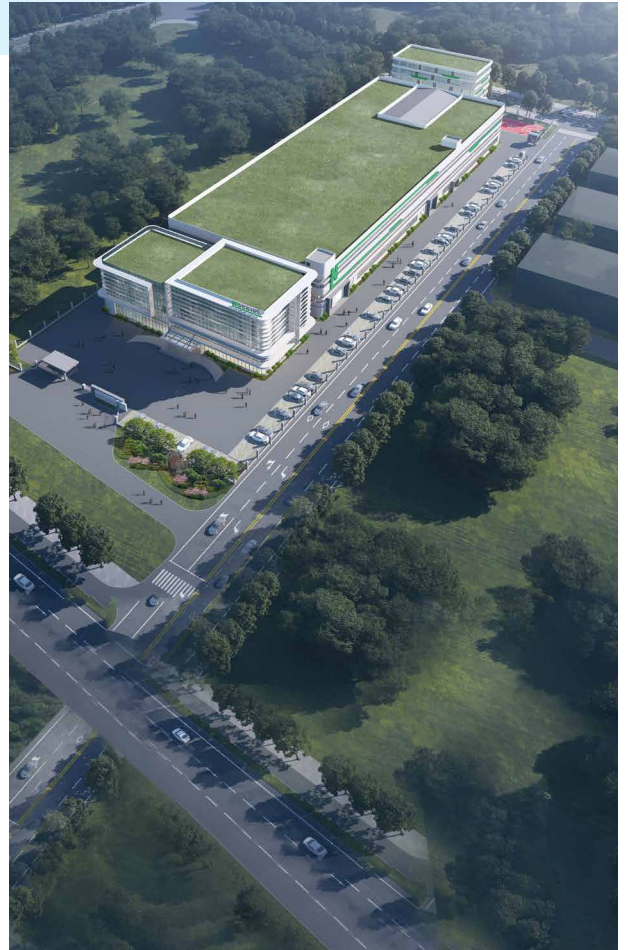


# Product Manual

- CNC Tool Grinder
- Grinding Wheel Dressing Machine
- Precision Filter System
- Oil Mist Collector

# About Us

Naseiko Precision Technology Co., Ltd. was established in 2015, committing to the R&D and production of CNC tool grinding machines and providing high-quality and efficient production tools for the cemented carbide tool industry. In 2019, Nazai Intelligent Technology (Zhejiang) Co., Ltd. was established in Huzhou, Zhejiang, and the assembly plant was relocated to Huzhou. Our products including five axes CNC grinding machines, standard milling cutter, acrylic milling cutter, CNC segment grinding machine, grinding wheel arc trimming machine, grinding oil treatment system, etc. We have an experienced technical service team, and have built a long-term cooperation with international renowned CNC grinding machine software companies.



High Standards



High Quality



High-quality Service

## Technical Development



Has an engineering technological R&D center for machines, which makes us as an industry leader. We will make optimization one-on-one for testing and improvement of the machines.

## Equipments Reserve



Believes technology creating future. We have international advanced testing equipment, excellent craftsmanship and refine quality management system, as well as professional team. It ensures our products stable and reliable.

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**C818****Five-axis Five-linkage CNC Tool Grinder****Technical Development**

Applied in 3C, medical, automotive, high speed rail, aerospace, precision cutting tools etc.

**Equipment Advantages**

- ▶ Integral mineral casting bed, Japan servo motor and screw guide rail (heavy-duty roller type) and AB rotating shaft with high torque DD direct drive motor.
- ▶ The permanent magnet constant torque spindle motor, dual grinding head structure and 360 degrees rotating of B-axis for non-standard cutting tools procession.
- ▶ Designed upon the concept of German 5-axis CNC grinding machines.
- ▶ Designed by integrating the practical experience and guidance.

**Main Components**

- CNC System - SYNTEC New Generation, Taiwan
- Centralized automatic lubrication station - Shengxiang
- Track - THK, Japan • Pneumatic system (solenoid valve, pressure reducing valve, air filter, etc.) - CHELIC, Taiwan
- Detection head - Renishaw, UK • Spindle - Taiwan • Circuit accessories - Schneider, France/Omron, Japan • Grating ruler - Heidenham, Germany • Dividing Plate - Shengchang, Taiwan

**Device parameters**

PROJECT	C818(MINI)	C818(POWER)	C818(VISION)
Japan servo motor drive (absolute value) stroke (X/Y/Z axis)	650 / 350 / 270mm	700 / 450 / 300mm	800 / 550 / 320mm
CNC system resolution (X/Y/Z axis)	0.0001mm	0.0001mm	0.0001mm
Minimum resolution for programming of handwheel feed (X/Y/Z axis)	0.0001mm	0.0001mm	0.0001mm
THK screw (X/Y/Z axis)	BN-FN32-C3	BN-FN32-C3	BN-FN32-C3
Repositioning accuracy (X/Y/Z axis)	0.003mm	0.003mm	0.003mm
Guide rail (X/Y/Z axis)	SRG35-P/ SRG35-P/SRG35-P	SRG35-P/ SRG35-P/SRG35-P	SRG35-P/ SRG35-P/SRG35-P
Workpiece rotation axis (A/B axis)	rotation axis	rotation axis	rotation axis
DD servo drive (A/B axis)	direct drive	direct drive	direct drive
Rotary encoder (A/B axis)	RENISHAW, UK	RENISHAW, UK	RENISHAW, UK
Indexing accuracy (A/B axis)	2 arc seconds (0.0005 degrees)	2 arc seconds (0.0005 degrees)	2 arc seconds (0.0005 degrees)
Rated speed (A/B axis)	300/100rpm	300/100rpm	300/100rpm
Maximum revolutions (A/B axis)	400/150rpm	400/150rpm	400/150rpm
CNC system resolution (A/B axis)	0.0001	0.0001	0.0001
360 degree rotation, indexing head body (A/B axis)	Could be installed with Schaublin W25 collet holder or BT50 knife handle	Could be installed with Schaublin W25 collet holder or BT50 knife handle	Could be installed with Schaublin W25 collet holder or BT50 knife handle
Quick movement (X/Y/Z axis)	7.5m/min	7.5m/min	7.5m/min
Minimum diameter for clamping workpiece	3mm	3mm	3mm
Maximum diameter for clamping workpiece	20mm	1-32mm	1-32mm
Maximum length for clamping workpiece	200mm	300mm	300mm
Minimum diameter for grinding workpiece	1mm	1mm	1mm
Maximum diameter for grinding workpiece	12mm	32mm	40mm
Maximum blade length for grinding	≤120mm	≤180mm	≤180mm
Maximum workpiece weight	5kg	5kg	5kg
Linear resolution	0.0001mm	0.0001mm	0.0001mm
Linear repeat positioning accuracy	0.003mm	0.003mm	0.003mm
Rotation resolution	0.0001mm	0.0001mm	0.0001mm
Rotation Repetitive Positioning Accuracy	0.001mm	0.001mm	0.001mm
Spindle power	permanent magnet variable frequency motor	permanent magnet variable frequency motor)	permanent magnet variable frequency motor
Grinding wheel diameter	75-150mm	75-150mm	75-150mm
Grinding wheel spindle speed	4000-8000rpm	4000-8000rpm	4000-8000rpm
Stepless adjustable	inverter	inverter	inverter
Machine weight	4000kg	5000kg	6500kg
Total power	≤22.5kw	≤30kw	≤45kw



\*Linear motor can be choesd for upgrading to C828 series





## Technical Development

Applied in 3C, medical, automotive, high speed rail, aerospace, precision cutting tools etc.

## Equipment Advantages

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- Track - THK, Japan
- Pneumatic system (solenoid valve, pressure reducing valve, air filter, etc.) - CHELIC, Taiwan
- Detection head - Renishaw, UK
- Spindle - Taiwan
- Circuit accessories - Schneider, France/Omron, Japan
- Dividing Plate - Shengchang, Taiwan



## Device parameters

PROJECT	NT618	PROJECT	NT618
Taiwan servo motor drive (absolute value) stroke (X/Y/Z axis)	500 / 470 / 250mm	Maximum diameter for clamping workpiece	1-20mm
CNC system resolution (X/Y/Z axis)	0.0001mm	Maximum length for clamping workpiece	250mm
Minimum resolution for programming of handwheel feed (X/Y/Z axis)	0.0001mm	Minimum diameter for grinding workpiece	1mm
THK screw (X/Y/Z axis)	BN-FN32-C3	Maximum diameter for grinding workpiece	16mm
Repositioning accuracy (X/Y/Z axis)	0.003mm	Maximum blade length for grinding	≤100
Guide rail (X/Y/Z axis)	HSR30mm	Maximum workpiece weight	5kg
Workpiece rotation axis (A/B axis)	rotation axis	Linear resolution	0.0001mm
DD servo drive (A/B axis)	direct drive	Linear repeat positioning accuracy	0.003mm
Rotary encoder (A/B axis)	RENISHAW, UK	Rotation resolution	0.0001mm
Indexing accuracy (A/B axis)	2 arc seconds (0.0005 degrees)	Rotation Repetitive Positioning Accuracy	0.001
Rated speed (A/B axis)	250 / 200rpm	Spindle power	permanent magnet variable frequency motor
Maximum revolutions (A/B axis)	250 / 200rpm	Grinding wheel diameter	75-150mm
CNC system resolution (A/B axis)	0.0001	Grinding wheel spindle speed	4000-8000rpm
360 degree rotation, indexing head body (A/B axis)	Could be installed with Schaublin W25 collet holder or BT50 knife handle	Stepless adjustable	inverter
Quick movement (X/Y/Z axis)	7.5m/min	Machine weight	4000kg
Minimum diameter for clamping workpiece	3mm	Total power	≤29kw

\*Linear motor can be choesd for upgrading to NT628 series.

## Technical Development

Applied to step grinding of formed cutting tools, machining of large aspect ratio workpieces, punches, and micro drills.

## Equipment Advantages

- ▶ The Five-axis Four-linkage (coarse and fine) CNC step grinder produced by our company is designed based on the design concept of the international advanced grinding machine company and the actual operating experience of domestic users, and is optimized and improved on the relevant basis. It is practical, economical and operational, maintenance, stability and efficiency are reflected.
- ▶ The machine tool system adopts imported ANCA (anca system and software. In order to optimize the relative position relationship of the servo axes of the equipment, the X, Y, Z, and V linear axes use imported ANCA ) anca servo motors and Japanese THK screw rods and guide rails, and shaft end supports use German INA high-precision bearing sets to ensure rigidity, production efficiency and quality during step grinding production, and can realize step grinding processing of semi-finished products of many types of tools.
- ▶ The machine tool is equipped with a 6-joint robot to realize fully automated workpiece picking, effectively reducing labor costs and management costs, improving the factory's fully automated production level and high production efficiency, greatly reducing the failure rate during repeated loading and unloading, and is more efficient than a rack-type manipulator, lower failure rate.

## Main Components

- X-axis, horizontal linear CNC axis, Australian Anca servo motor, THK precision ball screw, THK precision roller guide.
- Y-axis, horizontal linear CNC axis, Australian Anca servo motor, THK precision ball screw, THK precision roller guide rail.
- Z axis, horizontal linear CNC axis, Australian Anca servo motor, THK precision ball screw, THK precision roller guide.
- V-axis, horizontal linear CNC axis, Australian Anca servo motor, THK precision ball screw, THK precision roller guide.
- C-axis: infinite rotation, speed: 0~3000RPM. • High-precision imported universal probe (probe: workpiece detection).
- Integral marble bed. • Sealed hood, imported acrylic double doors, easy to operate and maintain.
- Use a mobile hand pulse with magnet for easy operation.
- Special permanent magnet electric spindle, the grinding wheel flange can be disassembled as a whole to the grinding wheel dressing machine to dress the grinding wheel.
- Install tubular sealed oil-proof LED lights inside the machine.



## Device parameters

PROJECT	NZ-50	PROJECT	NZ-50
ANCA servo motor drive (X/Y/Z axis)	70/320/110/30mm	Quick movement (X/Y/Z axis)	7.5m/min
CNC system resolution (X/Y/Z/V axis)	0.0001mm	Minimum diameter for clamping workpiece	0.5mm
Minimum resolution for Programming of handwheel feed (X/Y/Z/V axis)	0.0001mm	Maximum diameter for clamping workpiece	20mm
THK screw (X/Y/Z/V axis)	B1F32-C3	Maximum length for clamping workpiece	200mm
Repositioning accuracy (X/Y/Z/V axis)	0.003mm	Minimum diameter for grinding workpiece	0.05mm
Guide rail (X/Y/Z axis)	SRG 30-P	Maximum diameter for grinding workpiece	20mm
Workpiece rotation axis (C axis)	rotation axis	Linear resolution	0.0001mm
Rated speed (C axis/Fine spindle/pass spindle)	3000 / 9000 / 6000rpm	Linear repeat positioning accuracy	0.003mm
Maximum revolutions (Fine spindle/pass spindle)	15000 / 10000rpm	Grindstone model (fine/pass)	250x20x31.75/150x24x31.75
CNC system resolution (A/B axis)	0.0001mm	Machine weight	5000
360 degree rotation, indexing head body (AB axis)	Could be installed with W25 knife handle	Total power	≤30kw

## Technical Development

Applied to the sharpening and truing of the profiles of diamond grinding wheels, diamond grinding discs, CBN grinding wheels, circular rolling rings, etc.

## Equipments Advantages

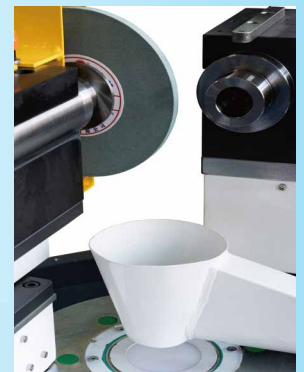
- ▶ It could not only trim diamond and CBN grinding wheel, but also the flat and side surface, angles, outer arcs and formed grinding wheel, as well as single and multiple grinding wheels.
- ▶ Ideal for grinding diamond and CBN grinding wheel, as well as other types of grinding wheels with convenient and efficient effect.
- ▶ Easy to operate with high accuracy.

## Main Components

- The principle is the speed difference between the repaired and dressing grinding wheel.
- The repaired wheel is for diamond and CBN grinding wheel, while the grinding wheel is green silicon carbide grinding wheel.
- The repaired grinding wheel could be adjusted in X-axis and Y-axis.
- The dressing wheel could be adjusted in rotating A-axis, X1-axis and Y-axis directions with variable speed frequency reciprocating oscillation. The X1-axis and Y1-axis could be rotated and positioned for achieving 180 ° rotation of the whole grinding wheel.
- Equipped with a CCD optical measurement system, grating ruler digital display measurement system, 10 Up to 100x magnification system and LCD display.

## Device parameters

PROJECT	NZ-01
Diamond grinding wheel spindle	BT40 / HSK50 / or customized
Maximum diameter of diamond grinding wheel	Φ400mm
Minimum diameter of diamond grinding wheel	Φ20mm
Maximum width of diamond grinding wheel	40mm
Diamond grinding wheel speed	0-1500rpm (continuously variable speed)
Diamond grinding wheel motor	0.75kw
Left and right movement distance of diamond grinding wheel	135mm
Forward and backward movement distance of diamond grinding wheel	135mm
Diamond arc size	Φ0.05-40mm
Dressing wheel (silicon carbide) diameter	Φ180 / 10 / ψ32mm
Dressing wheel speed	0-2800rpm
Motor Power of dressing grinding wheel	0.75kw
Number of swinging times of dressing grinding wheel	0-50rpm/min (continuously variable speed)
Length of swinging of dressing grinding wheel	0-50mm (adjustable)
Swing motor power of dressing grinding wheel	0.025kw
X-axis and Y-axis optical ruler device	0.001mm
CCD and high-definition lens	1 piece
Data acquisition card	1 set
Lens holder	1 set
Lens cross workbench	1 set
LED bottom light	1 piece
LED upper light	1 piece
Computer host	1 piece
LCD display screen	19 inch
Loading the EDIS measurement system	1 set
Power supply voltage	380V,50HZ
Total power	1.5kw
Machine size (length × wide × High)	1600 / 1200 / 1800mm
Total weight of the machine	1500kg







## Technical Development

The X - series (carbide) filtration equipment, with patented technology, filters particles over 1 $\mu$ m. Its automatic control system cleans filter cartridges, removes slag, and enables their reuse, extending replacement cycles. The dirt - cleaning process has adjustable time settings and runs without halting operations. Waste slag is automatically discharged for easy recycling.

## Device parameters

PROJECT	X-100	X-200	X-300	X-400	X-600
Capacity	700L	1100L	1600L	1800L	2400L
Accuracy	1-3 $\mu$ m	1-3 $\mu$ m	1-3 $\mu$ m	1-3 $\mu$ m	1-3 $\mu$ m
Flow Rate	120 $\pm$ 10%L/min	240 $\pm$ 10%L/min	360 $\pm$ 10%L/min	480 $\pm$ 10%L/min	720 $\pm$ 10%L/min
Vessel	1Pcs	2PCS	3PCS	4PCS	6PCS
Filter Power	1*2.2KW	1*3.0KW	1*4.0KW	2*3.0KW	2*4.0KW
Voltage	380V 50HZ	380V 50HZ	380V 50HZ	380V 50HZ	380V 50HZ
Air Pressure	0.6Mpa	0.6Mpa	0.6Mpa	0.6Mpa	0.6Mpa
Dimension	2.0*1.05*1.55M	2.0*1.8*1.55M	2.5*1.95*1.85M	2.6*1.95*1.85M	3.5*1.85*1.85M
Chiller	1*3P 7KW	1*5P 12KW	1*5P 12KW	1*10P 25KW	1*10P 25KW
Grinder	1	2	3	4	6

PROJECT	X-800	X-900	X-1000	X-1200	X-1500
Capacity	3400L	3800L	4400L	5500L	6400L
Accuracy	1-3 $\mu$ m	1-3 $\mu$ m	1-3 $\mu$ m	1-3 $\mu$ m	1-3 $\mu$ m
Flow Rate	960 $\pm$ 10%L/min	1080 $\pm$ 10%L/min	1200 $\pm$ 10%L/min	1440 $\pm$ 10%L/min	1800 $\pm$ 10%L/min
Vessel	8PCS	9PCS	10PCS	12PCS	15PCS
Filter Power	4*3.0KW	3*4.0KW	5*3.0KW	4*4.0KW	5*4.0KW
Voltage	380V 50HZ	380V 50HZ	380V 50HZ	380V 50HZ	380V 50HZ
Air Pressure	0.6Mpa	0.6Mpa	0.6Mpa	0.6Mpa	0.6Mpa
Dimension	4.0*2.10*1.85M	4.0*2.35*1.85M	4.9*2.35*1.86M	4.62*2.61*1.86M	5.50*2.0*2.0M
Chiller	1*15P 37KW	1*15P 37KW	1*20P 50KW	2*15P 74KW	2*15P 74KW
Grinder	8	9	10	12	15

## Technical Development

The G - series (high - speed steel) filtration equipment features an integrated design combining filter cartridge filtration, magnetic separation, constant temperature control, spindle cooling, oil mist removal, and dust collection. PLC - automated control minimizes human intervention, purifies the factory environment, efficiently filters high - speed steel dust and grinding wheel powder, ensuring more stable grinder operation, higher workpiece machining accuracy, and faster processing speed.



## Device parameters

PROJECT	G-100	G-200	G-300	G-400	G-600
Capacity	1000L	1600L	2000L	2400L	3000L
Accuracy	3-5μm	3-5μm	3-5μm	3-5μm	3-5μm
Flow Rate	120±10%/min	240±10%/min	360±10%/min	480±10%/min	720±10%/min
Vessel	1PCS	2PCS	3PCS	4PCS	6PCS
Filter Power	1*3.0KW	1*4.0KW	1*5.5KW	2*4.0KW	2*5.5KW
Voltage	380V 50HZ	380V 50HZ	380V 50HZ	380V 50HZ	380V 50HZ
Air Pressure	0.6Mpa	0.6Mpa	0.6Mpa	0.6Mpa	0.6Mpa
Dimension	2.30*1.25*1.80M	2.50*1.50*1.80M	3.40*1.50*1.80M	3.90*1.65*1.80M	4.0*2.10*1.90M
Chiller	1*3P 7KW	1*5P 12KW	1*5P 12KW	1*10P 25KW	1*10P 25KW
Grinder	1	2	3	4	6

PROJECT	G-800	G-900
Capacity	4200L	4500L
Accuracy	3-5μm	3-5μm
Flow Rate	960±10%/min	1080±10%/min
Vessel	8PCS	9PCS
Filter Power	4*4.0KW	3*5.5KW
Voltage	380V 50HZ	380V 50HZ
Air Pressure	0.6Mpa	0.6Mpa
Dimension	5.10*2.10*2.0M	5.10*2.45*2.0M
Chiller	1*15P 37KW	1*15P 37KW
Grinder	8	9





# 07 Oil mist collector

## Technical Development

The Huitang Oil Mist Collector is mainly designed to address the environmental issues in workshops, such as oil mist and dust, which occur during the mechanical processing. It is commonly applied to various processing equipment like CNC machining centers, cleaning machines, die-casting machines, CNC lathes, etc. By sucking out the oil mist from the processing cavities, it can purify the air, protect the respiratory health of workers, and effectively reduce the occurrence of fire hazards.



## Device parameters

PROJECT	EP-50E	EP-90E	EP-180E
Treatment Air Volume	800m <sup>3</sup> /H	1200m <sup>3</sup> /H	1800m <sup>3</sup> /H
Fan Power	0.18KW	0.24KW	0.4KW
Operating Voltage	220V/380V 50HZ	220V/380V 50HZ	220V/380V 50HZ
Dust Collection Efficiency	95%	95%	95%
Overall Dimensions	770*570*445mm	845*630*594mm	1385*620*623mm

PROJECT	EP-5000	EP-7000	EP-10000	EP-15000
Treatment Air Volume	5000m <sup>3</sup> /H	7000	10000m <sup>3</sup> /H	15000m <sup>3</sup> /H
Fan Power	1.6KW	4.0	5.0KW	5.5KW
Operating Voltage	220V/380V 50HZ	220V/380V 50HZ	220V/380V 50HZ	220V/380V 50HZ
Dust Collection Efficiency	98%	98%	98%	98%
Overall Dimensions	1700*640*1400	1250*852*2290	1940*650*1400mm	1190*1150*2255mm

Professional Quality · Pursuit Of Excellence



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