

High rigidity and quick response in combination with fast speed and high accuracy achieve efficient processing

# InstaCNC 2818/2817

## CNC High-Speed Machining Center



Applications:  
Precision drilling and milling/3C industry parts machining/automobile parts machining/precision mold machining/medical industry parts machining/aerospace parts machining /other precision parts machining

## 2818 CNC High-Speed Machining Center



### Product Features

#### CNC controller – SIEMENS SINUMERIK 828D

- All the latest commonly used communication ports are equipped: CF card, USB and RJ45 network ports.
- Easy maintenance: RV-RAM technology based data backup, no battery needed.
- Remote diagnosis: support remote manipulation and file transfer to achieve fast and convenient maintenance.
- "Fine surface" motion control technology: improve workpiece surface machining quality and meanwhile reduce processing time.
- Multistage machining mode selection: achieve high-efficiency machining, fast tapping and precision mold machining.
- Program GUIDE: reduce machining time and increase productivity.
- Easy Message (optional): access to machining status wherever you are by receiving text messages

#### High quality control – perfect control system

- Laser inspection all based on VDI/DGO 3441 standard.
- X/Y/Z axis positioning accuracy is controlled within 0,005/300.
- X/Y/Z axis repeatability is controlled within  $\pm 0,003$ mm.
- XY, YZ and ZX 2-axis contouring accuracy is controlled within 0,005mm.
- X/Y/Z axis acceleration can reach up to  $12.5\text{m/s}^2$  (1.28G) or higher to reduce machining time and increase productivity.

#### High-speed precision spindle – 20,000rpm

- Direct drive spindle: ensure tapping accuracy.
- Floating tool driving cylinder: prevent the bearing from impact force to maintain its accuracy and increase the life.
- Spindle 0-10,000 rpm accelerating time: 0.6 seconds.
- Spindle rigid tapping speed: 6,000 rpm.
- Maximum tapping size: M30.
- Example of maximum milling capability: S45C steel, 50mm diameter face milling cutter, 1.75mm cutting depth, iron chip removal rate  $Q=120\text{cc}$ .

#### Automatic tool changer system – high capacity tool magazine

- Tool magazine capacity: 20 (optional capacity: 30).
- Optimal tool change path: reduce tool change time.
- Tool preparation: reduce tool change time.

#### High-speed arm type tool changer – low inertia and impact

- Safe double arm design for high speed tool change.
- Minimum arm length design, reducing rotational inertia.
- Patented air pressure quick tool change device for high speed tool changing.
- Tool to tool time: 0.95 seconds.
- Chip to Chip time: 2.9 seconds.
- Buffer design between arm and tool holder to prevent the impact on spindle during tool changing.



## Product Features

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### High quality control – perfect control system

- Laser inspection all based on VDI/DGQ 3441 standard.
- X/Y/Z axis positioning accuracy is controlled within 0.005/300.
- X/Y/Z axis repeatability is controlled within ±0.003mm.
- XY, YZ and ZX 2-axis contouring accuracy is controlled within 0.005mm.
- X/Y/Z axis acceleration can reach up to 12.5m/s<sup>2</sup> (1.28G) or higher to reduce machining time and increase productivity.

### High-speed precision spindle – 20,000rpm

- Direct drive spindle: ensure tapping accuracy.
- Floating tool driving cylinder: prevent the bearing from impact force to maintain its accuracy and increase the life.
- Spindle 0-10,000 rpm accelerating time: 0.6 seconds.
- Spindle rigid tapping speed: 6,000 rpm.
- Maximum tapping size: M30.
- Example of maximum milling capability: S45C steel, 50mm diameter face milling cutter, 1.75mm cutting depth, iron chip removal rate Q= 120cc.

### Automatic tool changer system – high capacity tool magazine

- Tool magazine capacity: 21
- Optimal tool change path: reduce tool change time.
- Tool preparation: reduce tool change time.

### Servo drive – high stability

- Servo drive control
- Fast, efficient, fault free, highly stable

### High-speed arm type tool changer – low inertia and impact

- Safe double arm design for high speed tool change.
- Minimum arm length design, reducing rotational inertia.
- Patented air pressure quick tool change device for high speed tool changing.
- Tool to tool time: 0.95 seconds.
- Chip to Chip time: 2.9 seconds.
- Buffer design between arm and tool holder to prevent the impact on spindle during tool changing.

## Product Specifications

ITEM	2818		2817		
	S.A.E.	METRIC	S.A.E.	METRIC	
TRAVELS	X Axis	27.95 in	710 mm	27.95 in	710 mm
	Y Axis	17.32 in	440 mm	16.54 in	420 mm
	Z Axis	14.96 in	380 mm	11.81 in	300 mm
	Max Open Distance of Safety Door	26.38 in	670 mm	29.76 in	756 mm
	Min Distance Spindle Nose to Table	5.91 in	150 mm	7.09 in	180 mm
TABLE	Max Distance Spindle Nose to Table	20.87 in	530 mm	18.90 in	480 mm
	Length	34.25 in	870 mm	34.25 in	870 mm
	Width	17.72 in	450 mm	17.72 in	450 mm
	T-Slot Width	0.55 in	14 mm	0.55 in	14 mm
	T-Slot Center Distance	4.92 in	125 mm	4.92 in	125 mm
	Number of Std T-Slots	3	3	3	3
	Max Weight on Table (evenly distributed)	661 lb	300 kg	661 lb	300 kg
	Max Speed	20000 rpm	20000 rpm	20000 rpm	20000 rpm
	Max Torque (S6 40% DC)	29.5 lbf-ft @ 1500-2000 rpm	40 Nm @ 1500-2000 rpm	29.5 lbf-ft @ 1500-2000 rpm	40 Nm @ 1500-2000 rpm
	Rated Torque (S1 100% DC)	14.0 lbf-ft @ 1500-2000 rpm	19 Nm @ 1500-2000 rpm	14.0 lbf-ft @ 1500-2000 rpm	19 Nm @ 1500-2000 rpm
SPINDLE	Max Power (S6 40% DC)	25.5 hp	19.0 kW	25.5 hp	19.0 kW
	Rated Power (S1 100% DC)	6.4 hp	4.8 kW	6.4 hp	4.8 kW
	Drive System	Inline Direct-Drive	Inline Direct-Drive	Inline Direct-Drive	Inline Direct-Drive
	Taper	BT40	BT40	BT40	BT40
	Bearing Lubrication	Grease	Grease	Grease	Grease
	Cooling	Oil-Cooled	Oil-Cooled	Oil-Cooled	Oil-Cooled
	Type	Side Mount (SMTC)	Side Mount (SMTC)	Side Mount (SMTC)	Side Mount (SMTC)
	Capacity	20	20	21	21
	Max Tool Diameter	2.36 in	60 mm	3.94 in	100 mm
	Max Tool Diameter (no adjacent tools)	3.94 in	100 mm	5.51 in	140 mm
TOOL CHANGER	Max Tool Length	8.27 in	210 mm	9.84 in	250 mm
	Max Tool Weight	7 lb	3 kg	7 lb	3 kg
	Tool-to-Tool (avg)	0.95 sec	0.95 sec	1.8 sec	1.8 sec
	Chip-to-Chip (avg)	2.9 sec	2.9 sec	2.8 sec	2.8 sec
	X,Y,Z-Axis Max Cutting	1890 ipm	48 m/min	1181 ipm	30 m/min
	X,Y,Z-Axis Rapids	1890 ipm	48 m/min	1890 ipm	48 m/min
	X,Y,Z-Axis Acceleration	492.13 in/s <sup>2</sup>	12.5 m/s <sup>2</sup>	492.13 in/s <sup>2</sup>	12.5 m/s <sup>2</sup>
FEEDRATES	X,Y,Z-Axis Guide Rail Size	0.98/1.18/1.38 in	25/30/35 mm	0.98/1.18/1.38 in	25/30/35 mm
	X,Y,Z-Axis Ball Screw Size ( φ x lead)	1.26 x 0.63 in	32 x 16 mm	1.26 x 0.63 in	32 x 16 mm
	X,Y,Z-Axis Positioning Accuracy	0.000197/11.81 in	0.005/300 mm	0.000197/11.81 in	0.005/300 mm
	X,Y,Z-Axis Repeatability	±0.000118 in	±0.003 mm	±0.000118 in	±0.003 mm
	Floor Space (L x W x H) (incl. water tank)	95 x 76 x 90 in	2420 x 1920 x 2280 mm	95 x 76 x 90 in	2420 x 1920 x 2280 mm
GENERAL	Machine Weight (excl. water tank)	6283 lb	2850 kg	6283 lb	2850 kg
CONTROLLER	Siemens SINUMERIK 828D				

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## 2420 CNC High-Speed Machining Center



# InstaCNC 2420

## CNC High-Speed Machining Center



Applications:  
3C industry parts machining/precision mold machining/dry cutting of graphite materials/ machining of products requiring high machining accuracy/machining of parts with high surface requirements

### Configuration

1. Spindle cooling system
2. Automatic lubrication system
3. Spindle air blow system
4. Working light/tri-color alarm light
5. X/Y/Z-axis linear encoder

### Product Features

1. Light weight, small size, movable by forklift, can enter the factory freight elevator,
2. High-rigidity box type mechanical structure design (Box-in-Box).
3. High speed and high precision machining by using linear motors in X/Y/Z-axis along with high precision linear encoders positioning.
4. 32,000 rpm high speed automatic tool changer spindle with HSK-E40 tool holder.
5. Fast speed arm type tool changer with tool magazine capacity of 32.
6. Fully enclosed sheet metal design.
7. Enclosed tool magazine design.
8. Highly Efficient rear chip output and large capacity water tank.

### Product Specifications

	ITEM	S.A.E.	METRIC
TRAVELS	X Axis	23.62 in	600 mm
	Y Axis	19.69 in	500 mm
	Z Axis	11.81 in	300 mm
	Max Open Distance of Safety Door	27.56 in	700 mm
	Min Distance Spindle Nose to Table	4.33 in	110 mm
TABLE	Length	26.38 in	670 mm
	Width	24.41 in	620 mm
	T-Slot Width	0.55 in	14 mm
	T-Slot Center Distance	3.94 in	100 mm
	Number of Std T-Slots	3	3
	Max Weight on Table (evenly distributed)	220 lb	100 kg
SPINDLE	Max Speed	32000 rpm	32000 rpm
	Max Torque (S6 40% DC)	10.2 lbf-ft @ 1500-2000 rpm	13.8 Nm @ 1500-2000 rpm
	Rated Torque (S1 100% DC)	8.5 lbf-ft @ 1500-2000 rpm	11.5 Nm @ 1500-2000 rpm
	Max Power (S6 40% DC)	17.7 hp	13.2 kW
	Rated Power (S1 100% DC)	14.8 hp	11.0 kW
	Drive System	Inline Direct-Drive	Inline Direct-Drive
	Taper	HSK-E40	HSK-E40
	Bearing Lubrication	Grease	Grease
	Cooling	Oil-Cooled	Oil-Cooled
TOOL CHANGER	Type	Side Mount (SMTC)	Side Mount (SMTC)
	Capacity	32	32
	Max Tool Diameter	1.97 in	50 mm
	Max Tool Diameter (no adjacent tools)	2.99 in	76 mm
	Max Tool Length	9.84 in	250 mm
	Max Tool Weight	7 lb	3 kg
	Tool-to-Tool (avg)	0.8 sec	0.8 sec
	Chip-to-Chip (avg)	2.8 sec	2.8 sec
FEEDRATES	X,Y,Z-Axis Max Cutting	1181 ipm	30 m/min
	X,Y,Z-Axis Rapids	3543 ipm	90 m/min
	X,Y,Z-Axis Acceleration	866.14 in/s <sup>2</sup>	22 m/s <sup>2</sup>
	X,Y,Z-Axis Positioning Accuracy	0.000118/11.81 in	0.003/300 mm
	X,Y,Z-Axis Repeatability	±0.000079	±0.002 mm
GENERAL	Floor Space (L x W x H) (incl. water tank)	74 x 89 x 91 in	1880 x 2250 x 2300 mm
	Machine Weight (excl. water tank)	6614 lb	3000 kg
CONTROLLER	Siemens SINUMERIK 828D		

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# 2024 CNC High-Speed Engraving Center



## InstaCNC 2024 CNC High-Speed Engraving Center



**Applications:**  
Mobile phone front-panel machining/precision buttons, jig mass machining/electrode, jewelry & glasses, clocks, and small hardware parts machining/PC, acrylic machining/glass, sapphire, ceramics machining

### Product Features

1. Rigidity of the machine is improved by integral forming technology, box mechanism and reinforcing ribs.
2. HSK E32 high-speed spindle with stable performance, small dynamic balancing, and high gloss effect.
3. With pre-tension design at two ends, screw rod of X/Y/Z-axis is of higher rigidity and higher precision and stability.
4. Supported by linear guide rail, X/Y/Z-axis can bear heavy loads and move quickly, ensuring accurate positioning.
5. Adopt high-precision ground ball screw and preload nut to ensure high transmission accuracy and small mechanical error.
6. Spindle cavity interior is reinforced with ribs to provide a stable support for the spindle and ensure the precision.
7. Motion parts adopt fully enclosed structure.
8. Air source filtration: all Japanese SMC parts.
9. Lubrication system: regular automatic oil supply system, long-term maintenance-free, grease lubrication and anti-drip device.
10. Equipped with automatic tool changer, improving machining efficiency.

### Product Specifications

	ITEM	S.A.E.	METRIC
TRAVELS	X Axis	20.47 in	520 mm
	Y Axis	23.62 in	600 mm
	Z Axis	11.02 in	280 mm
	Max Open Distance of Safety Door	24.41 in	620 mm
	Min Distance Spindle Nose to Table	4.72 in	120 mm
TABLE	Max Distance Spindle Nose to Table	15.75 in	400 mm
	Length	20.47 in	520 mm
	Width	24.41 in	620 mm
	T-Slot Width	0.55 in	14 mm
	T-Slot Center Distance	3.94 in	100 mm
	Number of Std T-Slots	6	6
	Max Weight on Table (evenly distributed)	1102 lb	500 kg
SPINDLE	Max Speed	36000 rpm	36000 rpm
	Max Torque (S6 40% DC)	4.3 lbf-ft @ 1500-2000 rpm	5.8 Nm @ 1500-2000 rpm
	Rated Torque (S1 100% DC)	2.0 lbf-ft @ 1500-2000 rpm	2.7 Nm @ 1500-2000 rpm
	Max Power (S6 40% DC)	12.1 hp	9.0 kW
	Rated Power (S1 100% DC)	8.0 hp	6.0 kW
	Drive System	Inline Direct-Drive	Inline Direct-Drive
	Taper	HSK-E32	HSK-E32
	Bearing Lubrication	Grease	Grease
TOOL CHANGER	Cooling	Oil-Cooled	Oil-Cooled
	Type	Side Mount (SMTC)	Side Mount (SMTC)
TOOL CHANGER	Capacity	12	12
	Max Tool Diameter	3.15 in	80 mm
	Max Tool Diameter (no adjacent tools)	3.15 in	80 mm
	Max Tool Length	5.91 in	150 mm
	Max Tool Weight	4 lb	2 kg
	Tool Change Time	8 sec	8 sec
FEEDRATES	X,Y,Z-Axis Max Cutting	394 ipm	10 m/min
	X,Y,Z-Axis Rapids	591 ipm	15 m/min
	X,Y,Z-Axis Acceleration	393.70 in/s <sup>2</sup>	10 m/s <sup>2</sup>
	X,Y,Z-Axis Guide Rail Size	1.18 in	30 mm
	X,Y,Z-Axis Positioning Accuracy	0.000197/11.81 in	0.005/300 mm
GENERAL	X,Y,Z-Axis Repeatability	±0.000118 in	±0.003 mm
	Floor Space (L x W x H ) (incl. water tank)	80 x 68 x 87 in	2040 x 1720 x 2220 mm
CONTROLLER	Machine Weight (excl. water tank)	10141 lb	4600 kg
		Siemens SINUMERIK 828D	

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# 3120 CNC Vertical Machining Center



## InstaCNC 3120 CNC Vertical Machining Center



Applications:  
Widely used in machining in the fields of automation equipment, mold, medical, electronic, mechanical, automotive, aerospace, shipping, defense

### Configuration

1. Spindle cooling system
2. Automatic lubrication system
3. Spindle air blow system
4. Working light/tri-color alarm light
5. Frequency conversion tool magazine
6. X/Y/Z-axis linear guide rail

### Product Features

1. The machine bed is made of castings, the material is stable and internal stress is eliminated by annealing, which ensures the long-term precision and service life of the machine.
2. The column is of variable layer structure, greatly improving mechanical rigidity.
3. With pre-tension design at two ends, screw rod of X/Y/Z-axis is of higher rigidity and higher precision and stability.
4. Supported by linear guide rail, X/Y/Z-axis can bear heavy loads and move quickly, ensuring accurate positioning.
5. Adopt high-precision ground ball screw and preload nut to ensure high transmission accuracy and small mechanical error.
6. Spindle cavity interior is reinforced with ribs to provide a stable support for the spindle and ensure the precision.
7. Motion parts adopt fully enclosed structure.
8. Air source filtration: all Japanese SMC parts.
9. Lubrication system: regular automatic oil supply system, long-term maintenance-free, grease lubrication and anti-drip device.
10. Equipped with automatic tool changer, improving machining efficiency.

### Product Specifications

	ITEM	S.A.E.	METRIC
TRAVELS	X Axis	31.50 in	800 mm
	Y Axis	20.47 in	520 mm
	Z Axis	21.65 in	550 mm
	Max Open Distance of Safety Door	32.28 in	820 mm
	Min Distance Spindle Nose to Table	4.72 in	120 mm
TABLE	Max Distance Spindle Nose to Table	26.38 in	670 mm
	Length	39.37 in	1000 mm
	Width	19.69 in	500 mm
	T-Slot Width	0.71 in	18 mm
	T-Slot Center Distance	4.33 in	110 mm
	Number of Std T-Slots	5	5
	Max Weight on Table (evenly distributed)	992 lb	450 kg
SPINDLE	Max Speed	12000 rpm	12000 rpm
	Max Torque (S6 40% DC)	70.0 lbf-ft @ 1500-2000 rpm	95.0 Nm @ 1500-2000 rpm
	Rated Torque (S1 100% DC)	33.2 lbf-ft @ 1500-2000 rpm	45.0 Nm @ 1500-2000 rpm
	Max Power (S6 40% DC)	20.1 hp	15.0 kW
	Rated Power (S1 100% DC)	9.4 hp	7.0 kW
	Drive System	Inline Direct-Drive	Inline Direct-Drive
	Taper	BT40	BT40
	Bearing Lubrication	Grease	Grease
TOOL CHANGER	Cooling	Oil-Cooled	Oil-Cooled
	Type	Side Mount (SMTC)	Side Mount (SMTC)
TOOL CHANGER	Capacity	24	24
	Max Tool Diameter	3.15 in	80 mm
	Max Tool Diameter (no adjacent tools)	5.91 in	150 mm
	Max Tool Length	13.78 in	350 mm
	Max Tool Weight	18 lb	8 kg
	Tool-to-Tool (avg)	3.9 sec	3.9 sec
	Chip-to-Chip (avg)	5.9 sec	5.9 sec
	FEEDRATES	X,Y,Z-Axis Max Cutting	1181 ipm
X,Y,Z-Axis Rapids		1890 ipm	48 m/min
X,Y,Z-Axis Acceleration		393.70 in/s <sup>2</sup>	10 m/s <sup>2</sup>
X,Y,Z-Axis Guide Rail Size		1.38 in	35 mm
X,Y,Z-Axis Positioning Accuracy		0.000394/11.81 in	0.01/300 mm
GENERAL	X,Y,Z-Axis Repeatability	±0.000197 in	±0.005 mm
	Floor Space (L x V x H) (incl. water tank)	113 x 101 x 107 in	2874 x 2575 x 2720 mm
CONTROLLER	Machine Weight (excl. water tank)	8818 lb	4000 kg
		Siemens SINUMERIK 828D	

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# InstaCNC 4624

## CNC Vertical Machining Center



**Applications:**  
Widely used in machining in the fields of automation equipment, mold, medical, electronic, mechanical, automotive, aerospace, shipping, defense

# 4624 CNC Vertical Machining Center



### Configuration

1. Spindle cooling system
2. Automatic lubrication system
3. Spindle air blow system
4. Working light/tri-color alarm light
5. Frequency conversion tool magazine
6. X/Y/Z-axis linear guide rail

### Product Features

1. The machine bed is made of castings, the material is stable and internal stress is eliminated by annealing, which ensures the long-term precision and service life of the machine.
2. The inside of the column is of honeycomb structure, with high rigidity.
3. With pre-tension design at two ends, screw rod of X/Y/Z-axis is of higher rigidity and higher precision and stability.
4. Supported by linear guide rail, X/Y/Z-axis can bear heavy loads and move quickly, ensuring accurate positioning.
5. Adopt high-precision ground ball screw and preload nut to ensure high transmission accuracy and small mechanical error.
6. Motion parts adopt fully enclosed structure.
7. Air source filtration: all Japanese SMC parts.
8. Lubrication system: regular automatic oil supply system, long-term maintenance-free, grease lubrication and anti-drip device.
9. Equipped with automatic tool changer, improving machining efficiency.

### Product Specifications

	ITEM	S.A.E.	METRIC
TRAVELS	X Axis	45.67 in	1160 mm
	Y Axis	23.62 in	600 mm
	Z Axis	23.62 in	600 mm
	Max Open Distance of Safety Door	51.18 in	1300 mm
	Min Distance Spindle Nose to Table	5.91 in	150 mm
TABLE	Max Distance Spindle Nose to Table	29.53 in	750 mm
	Length	47.24 in	1200 mm
	Width	23.62 in	600 mm
	T-Slot Width	0.71 in	18 mm
	T-Slot Center Distance	3.94 in	100 mm
	Number of Std T-Slots	5	5
	Max Weight on Table (evenly distributed)	1764 lb	800 kg
SPINDLE	Max Speed	12000 rpm	12000 rpm
	Rated Torque (S1 100% DC)	33.2 lbf-ft @ 1500-2000 rpm	45 Nm @ 1500-2000 rpm
	Rated Power (S1 100% DC)	9.4 hp	7.0 kW
	Drive System	Inline Direct-Drive	Inline Direct-Drive
	Taper	BT40	BT40
	Bearing Lubrication	Grease	Grease
TOOL CHANGER	Cooling	Oil-Cooled	Oil-Cooled
	Type	Side Mount (SMTC)	Side Mount (SMTC)
	Capacity	24	24
	Max Tool Diameter	7.87 in	200 mm
	Max Tool Diameter (no adjacent tools)	7.87 in	200 mm
	Max Tool Length	11.81 in	300 mm
FEEDRATES	Max Tool Weight	18 lb	8 kg
	X,Y,Z-Axis Max Cutting	1181 ipm	30 m/min
	X,Y,Z-Axis Rapids	1417 ipm	36 m/min
	X,Y,Z-Axis Guide Rail Size	1.77 in	45 mm
	X,Y,Z-Axis Ball Screw Size (φ × lead)	1.57 × 0.47 in	40 × 12 mm
	X,Y,Z-Axis Positioning Accuracy	0.000394/19.69 in	±0.01/500 mm
GENERAL	X,Y,Z-Axis Repeatability	±0.000315 in	±0.008 mm
	Floor Space (L × W × H) (incl. water tank)	124 × 132 × 109 in	3148 × 3342 × 2760 mm
CONTROLLER	Machine Weight (excl. water tank)	14330 lb	6500 kg
	Siemens SINUMERIK 828D		

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# 6335 CNC Large Vertical Machining Center



## InstaCNC 6335 CNC Large Vertical Machining Center



Applications:  
Widely used in machining in the fields of 3C industry, automation equipment, mold, medical, electronic, mechanical, automotive, aerospace, shipping, defense

### Configuration Product Features

1. Spindle cooling system
2. Automatic lubrication system
3. Spindle air blow system
4. Working light/tri-color alarm light
5. Frequency conversion tool magazine
6. X/Y/Z-axis linear guide rail
1. Main castings of the machine are made of high-grade Meehanite cast iron and annealed to eliminate internal stress to ensure long-term precision and service life of the machine.
2. The column is of variable layer structure, greatly improving mechanical rigidity.
3. Guide rail is used between Z-axis counterweight and the column to prevent Z axis from colliding with the column while moving fast.
4. The X/Y/Z-axis adopts precision ball screw, directly driven by servo motor, with smaller backlash error.
5. Ultra wide machine base: One-piece casting, with high stability high rigidity and solidity.
6. Chip conveyor: screw type automatic chip removal machine, convenient for chip removal, saving labor time, long-term maintenance free.
7. Sheet metal integrated design, good overall performance.

### Product Specifications

	ITEM	S.A.E.	METRIC
TRAVELS	X Axis	62.99 in	1600 mm
	Y Axis	35.43 in	900 mm
	Z Axis	29.53 in	750 mm
	Max Open Distance of Safety Door	68.50 in	1740 mm
	Min Distance Spindle Nose to Table	8.27 in	210 mm
	Max Distance Spindle Nose to Table	37.80 in	960 mm
TABLE	Length	70.87 in	1800 mm
	Width	35.43 in	900 mm
	T-Slot Width	0.87 in	22 mm
	T-Slot Center Distance	6.50 in	165 mm
	Number of Std T-Slots	5	5
	Max Weight on Table (evenly distributed)	3527 lb	1600 kg
SPINDLE	Max Speed	12000 rpm	12000 rpm
	Max Torque (S6 40% DC)	99.6 lbf-ft @ 1500-2000 rpm	135 Nm @ 1500-2000 rpm
	Rated Torque (S1 100% DC)	42.0 lbf-ft @ 1500-2000 rpm	57 Nm @ 1500-2000 rpm
	Max Power (S6 40% DC)	29.5 hp	22.0 kW
	Rated Power (S1 100% DC)	12.1 hp	9.0 kW
	Drive System	Inline Direct-Drive	Inline Direct-Drive
	Taper	BT40	BT40
	Bearing Lubrication	Grease	Grease
	Cooling	Oil-Cooled	Oil-Cooled
	TOOL CHANGER	Type	Side Mount (SMTC)
Capacity		24	24
Max Tool Diameter		2.95 in	75 mm
Max Tool Diameter (no adjacent tools)		5.91 in	150 mm
Max Tool Length		11.81 in	300 mm
Max Tool Weight		18 lb	8 kg
Tool-to-Tool (avg)		2.5 sec	2.5 sec
Chip-to-Chip (avg)		4.6 sec	4.6 sec
FEEDRATES	X,Y,Z-Axis Max Cutting	1417 ipm	36 m/min
	X,Y,Z-Axis Rapids	1417 ipm	36 m/min
	X,Y,Z-Axis Acceleration	314.96 in/s <sup>2</sup>	8 m/s <sup>2</sup>
	X,Y,Z-Axis Guide Rail Size	1.77 in	45 mm
	X,Y,Z-Axis Ball Screw Size (φ × lead)	2.17 × 0.47 in	55 × 12 mm
	X,Y,Z-Axis Positioning Accuracy	0.000236-0.000787 in	0.006-0.02 mm
GENERAL	X,Y,Z-Axis Repeatability	±0.000118 in	±0.003 mm
	Floor Space (L × W × H) (incl. water tank)	128 × 226 × 138 in	3250 × 5750 × 3500 mm
CONTROLLER	Machine Weight (excl. water tank)	26455 lb	12000 kg
		Siemens SINUMERIK 828D	



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# 6351 CNC High-speed Gantry Machining Center



## InstaCNC 6351 CNC High-speed Gantry Machining Center



Applications:  
Widely used in machining in the fields of 3C industry, automation equipment, mold, medical, electronic, mechanical, automotive, aerospace, shipping, defense

### Product Specifications

	ITEM	S.A.E.	METRIC
TRAVELS	X Axis	62.99 in	1600 mm
	Y Axis	51.18 in	1300 mm
	Z Axis	23.62 in	600 mm
	Max Open Distance of Safety Door	47.24 in	1200 mm
	Min Distance Spindle Nose to Table	7.87 in	200 mm
	Max Distance Spindle Nose to Table	31.50 in	800 mm
TABLE	Length	66.93 in	1700 mm
	Width	47.24 in	1200 mm
	T-Slot Width	0.71 in	18 mm
	T-Slot Center Distance	5.91 in	150 mm
	Number of Std T-Slots	7	7
	Max Weight on Table (evenly distributed)	6614 lb	3000 kg
SPINDLE	Max Speed	12000 rpm	12000 rpm
	Rated Torque (S1 100% DC)	32.5 lbf-ft @ 1500-2000 rpm	44 Nm @ 1500-2000 rpm
	Rated Power (S1 100% DC)	10.7 hp	8.0 kW
	Drive System	Inline Direct-Drive	Inline Direct-Drive
	Taper	BT40	BT40
	Bearing Lubrication	Grease	Grease
	Cooling	Oil-Cooled	Oil-Cooled
TOOL CHANGER	Type	Side Mount (SMTC)	Side Mount (SMTC)
	Capacity	24	24
	Max Tool Diameter	3.15 in	80 mm
	Max Tool Diameter (no adjacent tools)	3.15 in	80 mm
	Max Tool Length	11.81 in	300 mm
	Max Tool Weight	18 lb	8 kg
FEEDRATES	X,Y,Z-Axis Max Cutting	394 ipm	10 m/min
	X,Y,Z-Axis Rapids	787 ipm	20 m/min
	X,Y,Z-Axis Guide Rail Size	1.77 in	45 mm
	X,Y,Z-Axis Ball Screw Size (φ × lead)	1.97 × 0.39 in	50 × 10 mm
	X,Y,Z-Axis Positioning Accuracy	±0.000394/19.69 in	±0.01/500 mm
GENERAL	X,Y,Z-Axis Repeatability	±0.00031 in	±0.008 mm
	Floor Space (L × W × H) (incl. water tank)	201 × 162 × 144 in	5100 × 4121 × 3658 mm
CONTROLLER	Machine Weight (excl. water tank)	30865 lb	14000 kg
		Siemens SINUMERIK 828D	



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# InstaCNC 7947

## CNC High-speed Gantry Machining Center



Applications:  
Television industry

# 7947 CNC High-speed Gantry Machining Center



### Configuration

1. CCD
2. Automatic loading and unloading device
3. Automatic positioning fixture
4. Constant temperature industrial water chiller
5. Spindle cooling system
6. Automatic lubrication system
7. Spindle air blow system
8. Working light/tri-color alarm light

### Product Features

1. Single spindle high-speed machining center with high-rigidity structure.
2. The main machine body adopts gantry structure with granite machine bed, providing good anti-vibration capability, rigidity and stability, thereby satisfying the specific requirements of customers for the surface machining of parts.
3. Ceramic ball bearing electric spindle, achieving high speed, high precision and longtime machining.
4. Constant temperature industrial water chiller increases life of spindle.
5. Integrated industrial PC, easy to operate.
6. Equipped with fast changing straight line type tool magazine with a capacity of 10, meeting the needs of modern high precision machining.

### Product Specifications

	ITEM	S.A.E.	METRIC
TRAVELS	X Axis	78.74 in	2000 mm
	Y Axis	47.24 in	1200 mm
	Z Axis	13.78 in	350 mm
	Max Open Distance of Safety Door	78.74 in	2000 mm
	Min Distance Spindle Nose to Table	5.91 in	150 mm
TABLE	Max Distance Spindle Nose to Table	19.69 in	500 mm
	Length	78.74 in	2000 mm
	Width	47.24 in	1200 mm
	T-Slot Width	0.71 in	18 mm
	T-Slot Center Distance	5.91 in	150 mm
	Number of Std T-Slots	7	7
SPINDLE	Max Weight on Table (evenly distributed)	1102 lb	500 kg
	Max Speed	30000 rpm	30000 rpm
	Rated Torque (S1 100% DC)	4.4 lbf-ft @ 1500-2000 rpm	6 Nm @ 1500-2000 rpm
	Rated Power (S1 100% DC)	10.1 hp	7.5 kW
	Drive System	Inline Direct-Drive	Inline Direct-Drive
	Taper	BT30	BT30
	Bearing Lubrication	Grease	Grease
	Cooling	Oil-Cooled	Oil-Cooled
TOOL CHANGER	Type	Side Mount (SMTC)	Side Mount (SMTC)
	Capacity	10	10
	Max Tool Diameter	3.15 in	80 mm
	Max Tool Diameter (no adjacent tools)	3.15 in	80 mm
	Max Tool Length	3.94 in	100 mm
	Max Tool Weight	4 lb	2 kg
FEEDRATES	X,Y,Z-Axis Max Cutting	197/591/1181 ipm	5/15/30 m/min
	X,Y,Z-Axis Rapids	1181 ipm	30 m/min
	X,Y,Z-Axis Guide Rail Size	1.38 in	35 mm
	X,Y,Z-Axis Ball Screw Size ( $\phi$ x lead)	1.57x0.79/1.57x0.79/1.26x0.63 in	40x20/40x20/32x16 mm
	X,Y,Z-Axis Positioning Accuracy	$\pm 0.000394/19.69$ in	$\pm 0.01/500$ mm
GENERAL	X,Y,Z-Axis Repeatability	$\pm 0.00031$ in	$\pm 0.008$ mm
	Floor Space (L x W x H ) (incl. water tank)	138 x 126 x 108 in	3500 x 3200 x 2750 mm
CONTROLLER	Machine Weight (excl. water tank)	22046 lb	10000 kg
		SYNTEC 6MD	

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# 2024G CNC Single-head Glass Mill



## InstaCNC 2024G CNC Single-head Glass Mill



Applicable industries:  
Suitable for processing flat panels, car and cellphone glass panels

### Configuration

- 1.Constant temp industrial water chiller
- 2.Automatic lubrication system
- 3.Spindle cutting gas blowing device
- 4.Spindle cutting cooling device
- 5.Working light/tri-color alarm light
- 6.CCD component

### Product Features

- 1.HL650G is a single-spindle high-speed machining center, with advanced design concept and high-rigidity structure, achieving high speed, high accuracy, and high stability.
- 2.The main machine adopts gantry structure with granite machine bed, providing good anti-vibration capability, rigidity and stability, thereby satisfying the special requirements of customers for the surface machining of parts.
- 3.Ceramic ball bearing electric spindle can realize high speed, high precision and longtime machining.
- 4.Constant temperature industrial water chiller prolongs service life of spindle.
- 5.Integrated industrial PC, easy to operate.
- 6.Equipped with high precision CCD component, realizing accurate automatic positioning and calibration.
- 7.Equipped with half-umbrella-shaped tool magazine, which can hold 12 tools, with fast tool change speed, meeting the needs of modern high precision machining.
- 8.This machine can be equipped with optional robot, tailor made and integrated, and can also realize automation intelligent factory mode.

### Product Specifications

	ITEM	S.A.E.	METRIC
TRAVELS	X Axis	24.41 in	620 mm
	Y Axis	19.69 in	500 mm
	Z Axis	3.94 in	100 mm
	Max Open Distance of Safety Door	23.23 in	590 mm
	Min Distance Spindle Nose to Table	3.94 in	100 mm
TABLE	Max Distance Spindle Nose to Table	7.87 in	200 mm
	Length	23.62 in	600 mm
	Width	19.69 in	500 mm
	T-Slot Width	0.47 in	12 mm
	T-Slot Center Distance	3.15 in	80 mm
SPINDLE	Number of Std T-Slots	6	6
	Max Weight on Table (evenly distributed)	220 lb	100 kg
	Max Speed	60000 rpm	60000 rpm
	Rated Torque (S1 100% DC)	0.21 lbf-ft @ 1500-2000 rpm	0.29 Nm @ 1500-2000 rpm
	Rated Power (S1 100% DC)	2.4 hp	1.8 kW
TOOL CHANGER	Drive System	Inline Direct-Drive	Inline Direct-Drive
	Bearing Lubrication	Grease	Grease
	Cooling	Oil-Cooled	Oil-Cooled
	Type	Side Mount (SMTC)	Side Mount (SMTC)
	Capacity	12	12
FEEDRATES	Max Tool Diameter	1.18 in	30 mm
	Max Tool Diameter (no adjacent tools)	1.18 in	30 mm
	Max Tool Length	2.36 in	60 mm
	Max Tool Weight	1.1 lb	0.5 kg
	Tool Change Time	8 sec	8 sec
GENERAL	X,Y,Z-Axis Max Cutting	591 ipm	15 m/min
	X,Y,Z-Axis Rapids	1181 ipm	30 m/min
	X,Y,Z-Axis Positioning Accuracy	0.000315/11.81 in	0.008/300 mm
CONTROLLER	X,Y,Z-Axis Repeatability	±0.000197 in	±0.005 mm
	Floor Space (L x W x H) (incl. water tank)	61 x 73 x 89 in	1550 x 1860 x 2250 mm
	Machine Weight (excl. water tank)	5071 lb	2300 kg
	WEIHONG NC65C-4Z		

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# 0812 CNC Four-head Glass Mill



## InstaCNC 0812 CNC Four-head Glass Mill



### Configuration

1. Automatic loading/unloading device
2. Automatic positioning fixture
3. Constant temp industrial water chiller
4. Automatic lubrication system
5. Spindle cutting gas blowing device
6. Spindle cutting cooling device
7. Working light/tri-color alarm light

### Product Features

1. HL400G/2&HL800G/4 is a double-/four-spindle high-speed machining center, with advanced design concept and high-rigidity structure, achieving high speed, high accuracy, and high stability.
2. The main machine adopts gantry structure with granite machine bed, providing good anti-vibration capability, rigidity and stability, thereby satisfying the special requirements of customers for the surface machining of parts.
3. Ceramic ball bearing electric spindle can realize high speed, high precision and long time machining.
4. Constant temperature industrial water chiller prolongs service life of spindle.
5. Automatic door reduces labor intensity and improves production efficiency.
6. Integrated industrial PC, easy to operate, optional CCD.
7. Automatic fixture improves processing efficiency.
8. High precision negative pressure detection ensures product and machine safety and also ensures yield rate.
9. Optional automatic loading/unloading robot helps to realize automation.

### Product Specifications

	ITEM	S.A.E.	METRIC
TRAVELS	X Axis	7.87 in	200 mm
	Y Axis	11.81 in	300 mm
	Z Axis	3.94 in	100 mm
	Max Open Distance of Safety Door	31.50 in	800 mm
	Min Distance Spindle Nose to Table	2.36 in	60 mm
TABLE	Max Distance Spindle Nose to Table	6.30 in	160 mm
	Length	31.50 in	800 mm
	Width	11.81 in	300 mm
	T-Slot Width	0.47 in	12 mm
	T-Slot Center Distance	3.15 in	80 mm
SPINDLE	Number of Std T-Slots	4	4
	Max Weight on Table (evenly distributed)	220 lb	100 kg
	Max Speed	60000 rpm	60000 rpm
	Rated Torque (S1 100% DC)	0.21 lbf-ft @ 1500-2000 rpm	0.29 Nm @ 1500-2000 rpm
	Rated Power (S1 100% DC)	2.4 hp	1.8 kW
FEEDRATES	Drive System	Inline Direct-Drive	Inline Direct-Drive
	Bearing Lubrication	Grease	Grease
	Cooling	Oil-Cooled	Oil-Cooled
	X,Y,Z-Axis Max Cutting	591 ipm	15 m/min
	X,Y,Z-Axis Rapids	1181 ipm	30 m/min
GENERAL	X,Y,Z-Axis Positioning Accuracy	0.000315/11.81 in	0.008/300 mm
	X,Y,Z-Axis Repeatability	±0.000197 in	±0.005 mm
	Floor Space (L x W x H ) (incl. water tank)	75 x 83 x 89 in	1900 x 2100 x 2250 mm
CONTROLLER	Machine Weight (excl. water tank)	6173 lb	2800 kg
	WEIHONG NC65C-4Z		

Applicable industries:  
Suitable for processing flat panels, smart home, high-end cellphone cover plates

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# 3124 CNC Single-head Glass Mill



## InstaCNC 3124 CNC Single-head Glass Mill



Applicable industries:  
Automobile industry panel glass machining

### Configuration

- 1.CCD
- 2.Constant temp industrial water chiller
- 3.Automatic lubrication system
- 4.Spindle cutting gas blowing device
- 5.Spindle cutting cooling device
- 6.Working light/tri-color alarm light

### Product Features

- 1.HL860G is a single-spindle high-speed machining center, with advanced design concept and high-rigidity structure, achieving high speed, high accuracy, and high stability.
- 2.The main machine adopts gantry structure with granite machine bed, providing good anti-vibration capability, rigidity and stability, thereby satisfying the special requirements of customers for the surface machining of parts.
- 3.Ceramic ball bearing electric spindle can realize high speed, high precision and long time machining.
- 4.Imported guide rails, Grade-C3 THK screw rods.
- 5.Constant temperature industrial water chiller prolongs service life of spindle.
- 6.The whole machine is lubricated with the oil system of quantitative distribution, all lubrication points are fed with oil evenly, so lubrication is more reasonable and service life is longer.
- 7.Integrated industrial PC, easy to operate.
- 8.Equipped with high precision CCD component, realizing accurate automatic positioning and calibration.
- 9.This machine can be equipped with optional robot, tailor made and integrated, and can also realize automation intelligent factory mode.

### Product Specifications

	ITEM	S.A.E.	METRIC
TRAVELS	X Axis	31.50 in	800 mm
	Y Axis	23.62 in	600 mm
	Z Axis	3.94 in	100 mm
	Max Open Distance of Safety Door	30.71 in	780 mm
	Min Distance Spindle Nose to Table	1.57 in	40 mm
	Max Distance Spindle Nose to Table	5.51 in	140 mm
TABLE	Length	31.50 in	800 mm
	Width	23.62 in	600 mm
	T-Slot Width	0.47 in	12 mm
	T-Slot Center Distance	3.15 in	80 mm
	Number of Std T-Slots	6	6
	Max Weight on Table (evenly distributed)	220 lb	100 kg
SPINDLE	Max Speed	60000 rpm	60000 rpm
	Rated Torque (S1 100% DC)	0.21 lbf-ft @ 1500-2000 rpm	0.29 Nm @ 1500-2000 rpm
	Rated Power (S1 100% DC)	2.4 hp	1.8 kW
	Drive System	Inline Direct-Drive	Inline Direct-Drive
	Bearing Lubrication	Grease	Grease
FEEDRATES	Cooling	Oil-Cooled	Oil-Cooled
	X, Y, Z-Axis Max Cutting	591 ipm	15 m/min
	X, Y, Z-Axis Rapids	1181 ipm	30 m/min
	X, Y, Z-Axis Positioning Accuracy	0.000315/11.81 in	0.008/300 mm
	X, Y, Z-Axis Repeatability	±0.000197 in	±0.005 mm
GENERAL	Floor Space (L x W x H) (incl. water tank)	71 x 73 x 83 in	1800 x 1860 x 2100 mm
	Machine Weight (excl. water tank)	6614 lb	3000 kg
CONTROLLER	WEIHONG NC65C-4Z		

High rigidity and quick response in combination with fast speed and high accuracy achieve efficient processing

# 5131 CNC Single-head Glass Mill



## InstaCNC 5131 CNC Single-head Glass Mill



Applicable industries:  
Can be widely used in cutting, chamfering, bevelling, hole and contour processing of PC, acrylic, glass lenses

### Configuration

- 1.CCD
- 2.Automatic loading/unloading device
- 3.Automatic positioning fixture
- 4.Constant temp industrial water chiller
- 5.Automatic lubrication system
- 6.Spindle cutting gas blowing device
- 7.Spindle cutting cooling device
- 8.Working light/tri-color alarm light

### Product Features

- 1.HL1380G is a single-spindle high-speed machining center, with advanced design concept and high-rigidity structure, achieving high speed, high accuracy, and high stability.
- 2.The main machine adopts gantry structure with granite machine bed, providing good anti-vibration capability, rigidity and stability, thereby satisfying the special requirements of customers for the surface machining of parts.
- 3.Ceramic ball bearing electric spindle can realize high speed, high precision and long time machining.
- 4.Imported guide rails, Grade-C3 THK screw rods.
- 5.Constant temperature industrial water chiller prolongs service life of spindle.
- 6.Integrated industrial PC, easy to operate.
- 7.Equipped with high precision CCD component, realizing accurate automatic positioning and calibration.
- 8.Equipped with long-reach robot, realizing automatic quick loading/unloading.
- 9.Equipped with straight line tool magazine, which can hold 5 tools, with fast tool change speed, meeting the needs of modern high precision machining.

### Product Specifications

	ITEM	S.A.E.	METRIC
TRAVELS	X Axis	51.18 in	1300 mm
	Y Axis	31.50 in	800 mm
	Z Axis	5.91 in	150 mm
	Max Open Distance of Safety Door	72.83 in	1850 mm
	Min Distance Spindle Nose to Table	4.72 in	120 mm
	Max Distance Spindle Nose to Table	10.63 in	270 mm
TABLE	Length	51.18 in	1300 mm
	Width	31.50 in	800 mm
	T-Slot Width	0.47 in	12 mm
	T-Slot Center Distance	3.94 in	100 mm
	Number of Std T-Slots	7	7
SPINDLE	Max Weight on Table (evenly distributed)	220 lb	100 kg
	Max Speed	60000 rpm	60000 rpm
	Rated Torque (S1 100% DC)	0.21 lbf-ft @ 1500-2000 rpm	0.29 Nm @ 1500-2000 rpm
	Rated Power (S1 100% DC)	2.4 hp	1.8 kW
	Drive System	Inline Direct-Drive	Inline Direct-Drive
	Bearing Lubrication	Grease	Grease
TOOL CHANGER	Cooling	Oil-Cooled	Oil-Cooled
	Type	Side Mount (SMTC)	Side Mount (SMTC)
	Capacity	5	5
	Max Tool Diameter	1.97 in	50 mm
	Max Tool Diameter (no adjacent tools)	1.97 in	50 mm
	Max Tool Length	3.94 in	100 mm
FEEDRATES	Max Tool Weight	1.1 lb	0.5 kg
	Tool Change Time	5 sec	5 sec
	X,Y,Z-Axis Max Cutting	591 ipm	15 m/min
	X,Y,Z-Axis Rapids	1181 ipm	30 m/min
	X,Y,Z-Axis Positioning Accuracy	0.000315/11.81 in	0.008/300 mm
	X,Y,Z-Axis Repeatability	±0.000197 in	±0.005 mm
GENERAL	Floor Space (L x W x H) (incl. water tank)	71 x 73 x 83 in	2970 x 3220 x 2700 mm
	Machine Weight (excl. water tank)	9921 lb	4500 kg
CONTROLLER	WEIHONG NC65C-4Z		