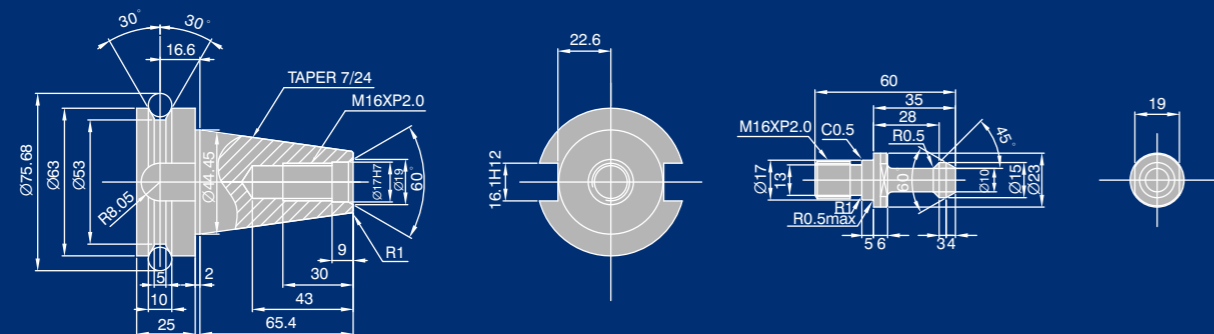


Tooling System

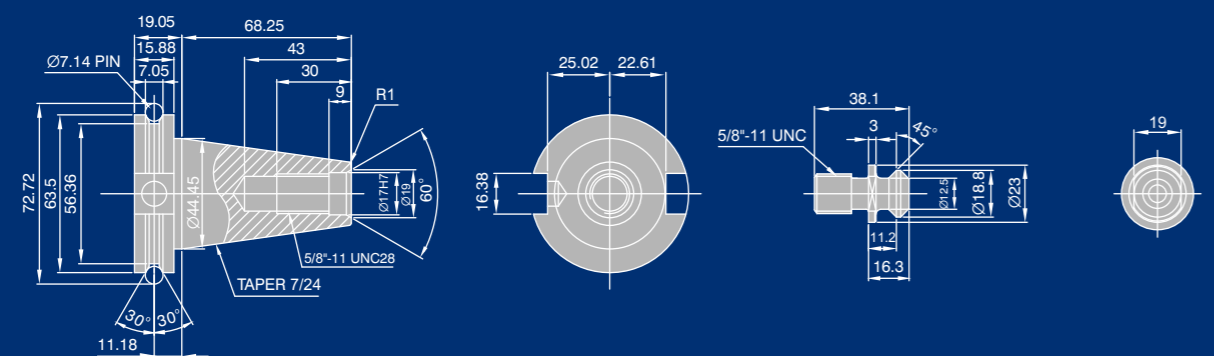


BT-40



CNV Series

CAT-40



Campro Precision Machinery Co., Ltd.



NO. 12, JINGKE 1ST RD., NANTUN,
TAICHUNG 40852, TAIWAN
TEL: +886-4-23500501
FAX: +886-4-23500213
E-mail:sales@campro.com.tw



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Campro Precision Machinery Co., Ltd.

www.campro.com.tw

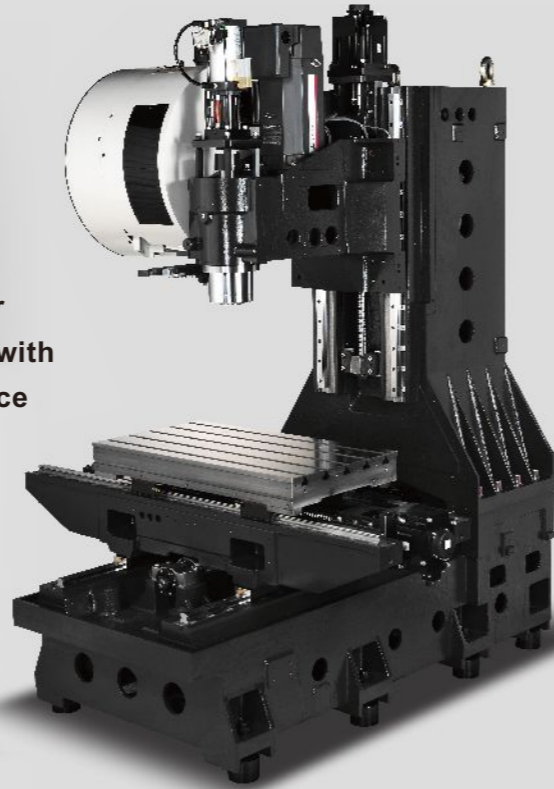
Economy, Efficiency, Precision

CNV Series-Perfect for both entry-level and advanced users.

CNV-850 / 1050

Machine Features

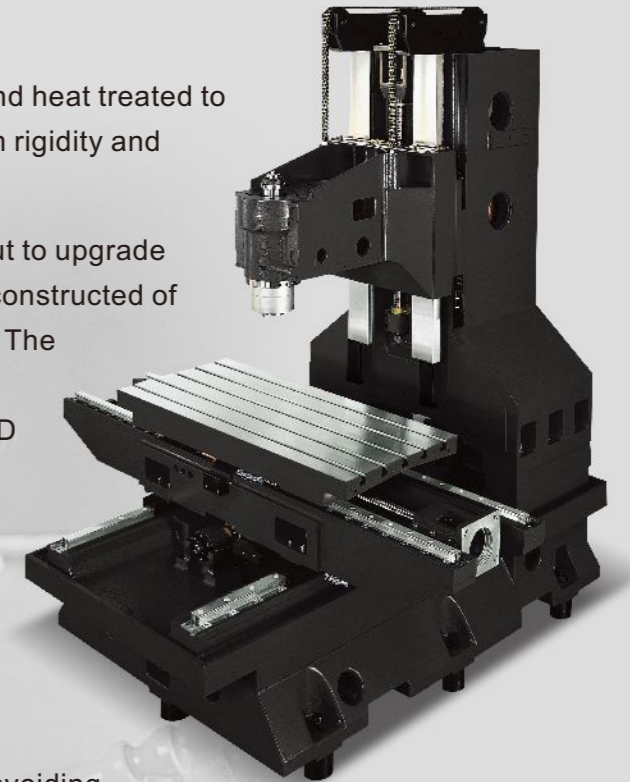
- The high cast-iron construction meets maximum rigidity and accuracy be designed via Finite Element Analysis (FEA) and advanced 3D software.
- All axes are equipped precision linear guide ways, direct drive servo motor with coupling and without counter-balance on Z-axis ensuring machining accuracy.
- User-friendly operation is designed as easy to chip disposal and ergonomically control panel enable to swivel 0~75 degrees to reduce operator fatigue and increase working efficiency.



CNV-1100 / 1300

Machine Features

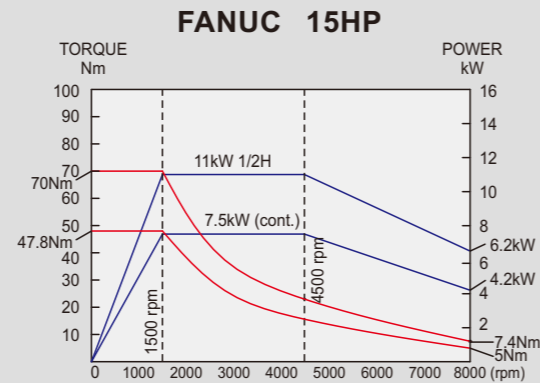
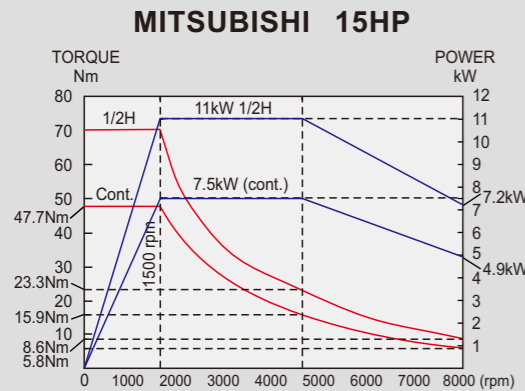
- Constructed with high quality cast iron and heat treated to relieve stress thereby assuring maximum rigidity and accuracy.
- The base is reinforced by A type rib layout to upgrade absorption capability of vibration and is constructed of a box type structure for excellent rigidity. The machine structure is designed via Finite Element Analysis (FEA) and advanced 3D software.
- Box ways on Z-axis, X/Y axes are equipped with precision heavy loading linear guide ways, featuring high positioning accuracy.
- The counter-balance system is equipped with a guide rail for increasing stability, avoiding vibration during high feedrate or rapid traverse and ensuring machining accuracy.





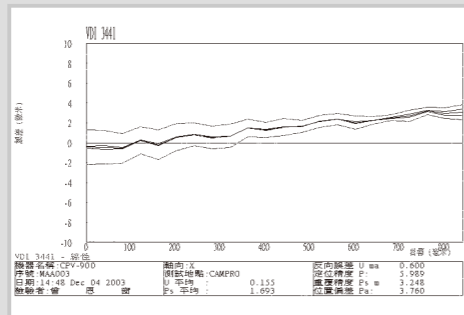
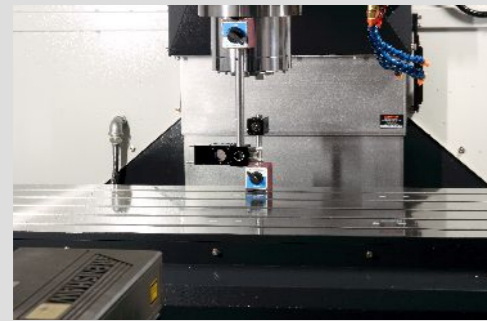
Belt type spindle has an advanced labyrinth structure that can avoid coolant from getting into inside of the spindle unit and increase the durability of the spindle. A spindle air blast device automatically clean the interior part of the spindle taper during tools change

Spindle Diagrams

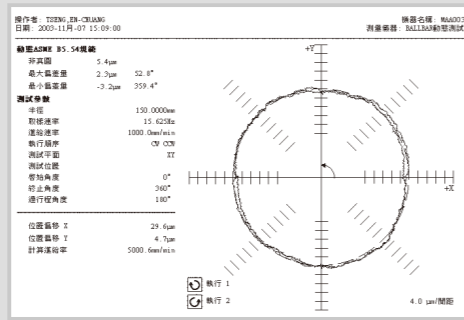


Quality Inspection

Final laser inspection and ball bar testing before delivery.



Final laser inspection
Bi-directional positioning accuracy and repeatability accuracy inspection are conducted according to VDI standards.



Ball bar test
Ball bar tester to inspect the circularity and the geometric accuracy to ensure circle cutting accuracy. We guarantee ball bar testing accuracy reaches 10 μm.

Optional Accessories

Coolant Through spindle



The coolant through spindle device gives 10 or 20 bars high pressure cooling effect. The coolant passes through the spindle and flushes through the tool edge for directly cooling the workpiece and tool edge.

Coolant Flushing Device



There are coolant flushing nozzles equipped on both sides of the table which provide high pressure coolant flushing and efficient chip disposal.

Spindle Oil Cooler



The spindle oil cooler maintains a constant temperature and enhances the capability to avoid the thermal extension.

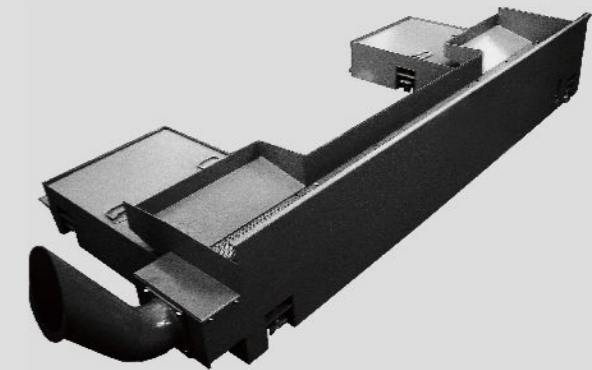
Auto Tool Length Measurement



Linear Scales



Chip Screw Conveyor

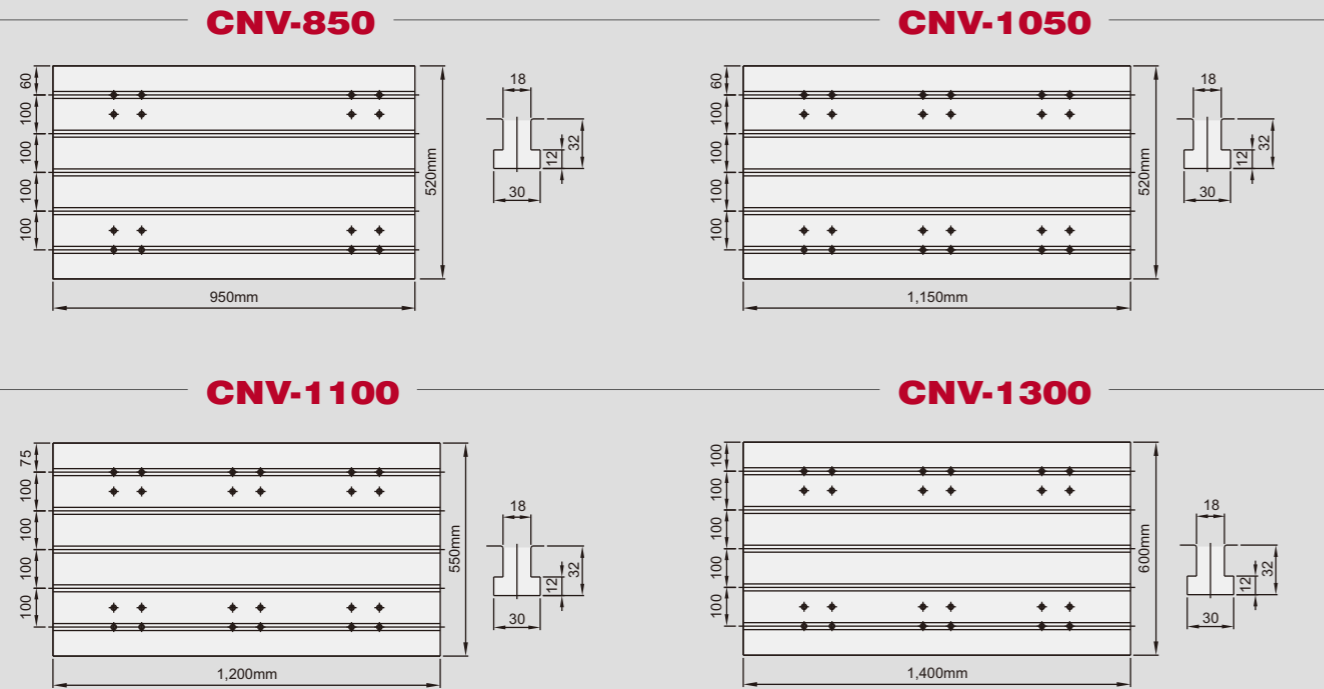


Chain Type Chip Conveyor



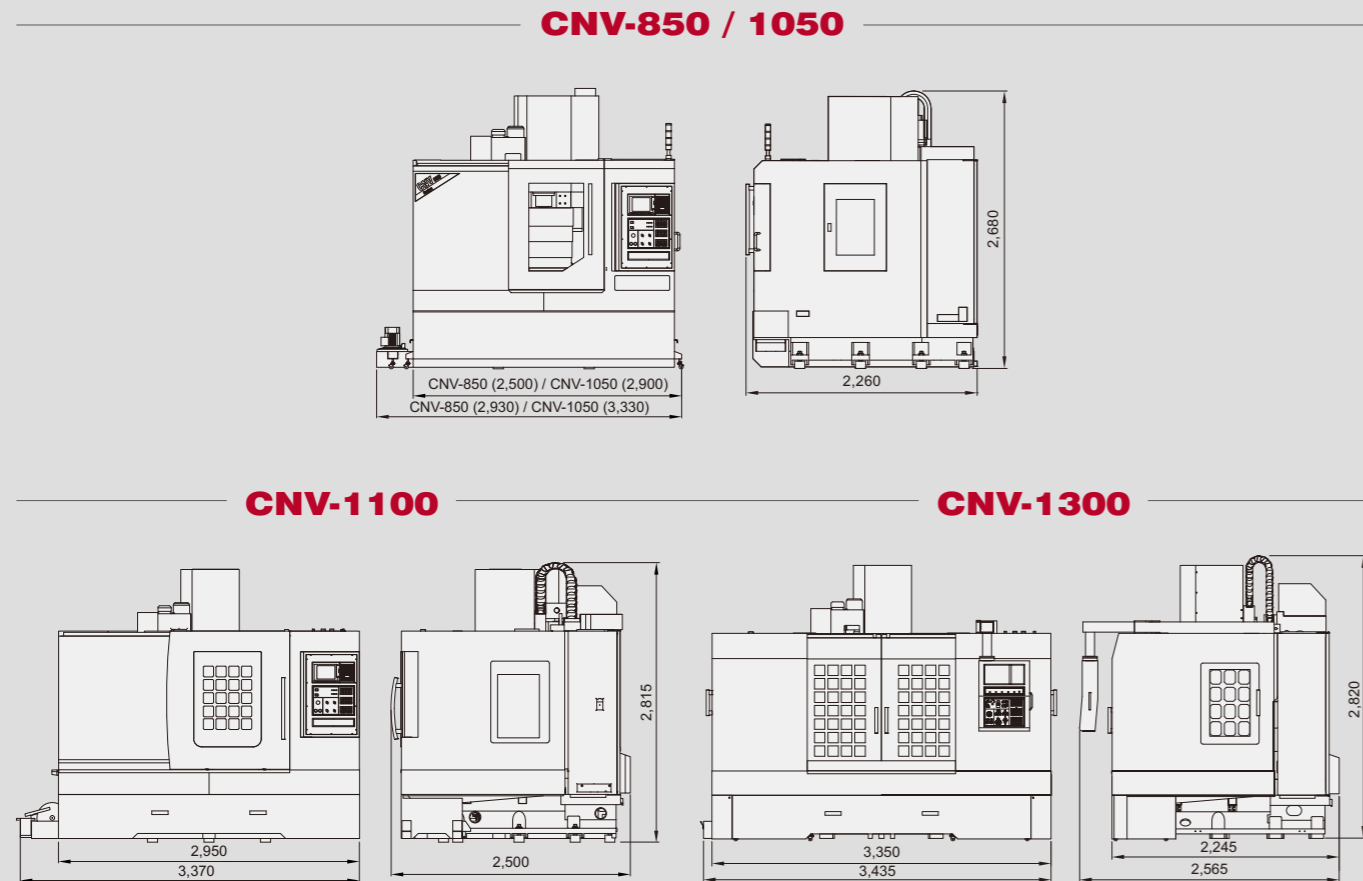
Table Dimensions

Unit : mm



Machine Dimensions

Unit : mm



Machine Specifications

MODEL	UNIT	CNV-850	CNV-1050	CNV-1100	CNV-1300
TRAVEL					
X-axis travel	mm	850 (33.4")	1,050 (41.3")	1,100 (43.3")	1,300 (51.1")
Y-axis travel	mm	520 (20.4")	540 (21.2")	580 (22.8")	600 (23.6")
Z-axis travel	mm	520 (20.4")	520 (20.4")	560 (22")	560 (22")
TABLE					
Distance from spindle nose to table	mm	110~630 (4.3"~24.8")		90~650 (3.5"~25.5")	80~640 (3.1"~25")
Distance from spindle center to column	mm	630 (24.8")			
Table dimension	mm	950 x 520 (37.4" x 20.4")	1,150 x 520 (45.2" x 20.4")	1,200 x 550 (47.2" x 21.6")	1,400 x 600 (55.1" x 23.6")
Max. table load	kg	500 (1,102 lbs)	600 (1,322 lbs)	700 (1,543 lbs)	900 (1,984 lbs)
T-slots (W x NO. x P)	mm	18 x 5 x 100 (0.7" x 5 x 3.9")			
SPINDLE					
Spindle speed (Optional)	rpm	8,000 (10,000 / 12,000)			
Spindle motor	kw	7.5 / 11 (15HP)			
Spindle taper	type	7/24 taper No.40			
AUTO. TOOL CHANGE					
ATC type	type	Arm Type			
Tool shank	type	BT-40			
Pull stud	type	P-40T (45°)			
Tool storage capacity	pcs.	24 (20T)			
Max. tool diameter	mm	Ø80 (3.1")			
Max. tool diameter (Adjacent empty)	mm	Ø150 (5.9")			
Max. tool length	mm	250 (9.8")			
Max. tool weight	kg	7 (15.4 lbs)			
Tool change time (Tool to Tool)	sec.	3.5			
Tool change time (Chip to Chip)	sec.	7			
Tool selection	type	Random Type			
FEEDRATE					
Rapid feedrate (X / Y / Z)	m/min	30/30/30 (1.181/1.181/1.181 ipm)		30/30/24 (1.181/1.181/944.8 ipm)	24/24/24 (944.2/944.8/944.8 ipm)
Cutting feedrate	mm/min	10,000 (393.69 ipm)			
OTHER					
Air source		6~8 kgf / cm ²			
Power capacity		15 KVA			20 KVA
Max. machine height	mm	2,680 (105.5")		2,815 (110.8")	2,820 (111.1")
Floor plan (W x D)	mm	2,930 x 2,260 (115.3" x 88.9")	3,330 x 2,260 (131.1" x 88.9")	3,370 x 2,500 (132.7" x 98.4")	3,435 x 2,565 (135.9" x 101")
Machine weight	kg	5,000 (11,023 lbs)	5,700 (12,566 lbs)	6,700 (14,770 lbs)	7,500 (16,534 lbs)

• Machine specifications and design are subject to change without prior notice due to on-going innovation.

Standard accessories

- 8,000 rpm belt transmission
- Rigid tapping
- Spindle air blast system
- Pre-tensioned ballscrews on 3 axes
- Telescopic covers on 3 axes
- Pneumatic system
- Automatic lubrication system
- Heat exchanger for electrical cabinet

Optional accessories

- 10,000 / 12,000 rpm belt transmission spindle
- Spindle oil cooler
- Chip conveyor
- Chip screw conveyor
- Coolant through spindle
- Deep hole adaptor
- High pressure pump
- Linear scales
- 4th-axis rotary table
- Automatic tool length measurement
- Workpiece measurement
- Air condition
- CE modification
- Transformer