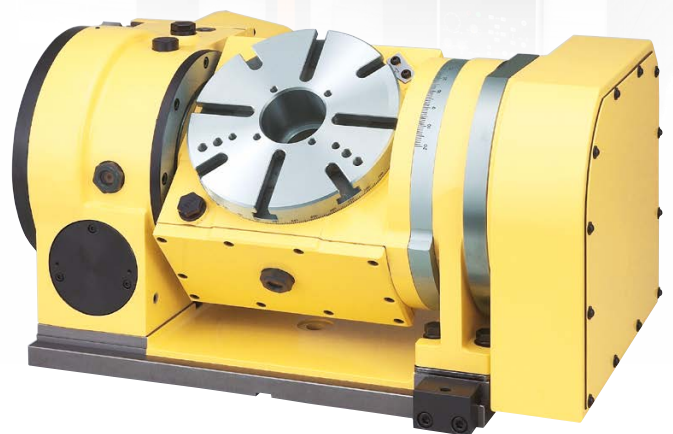
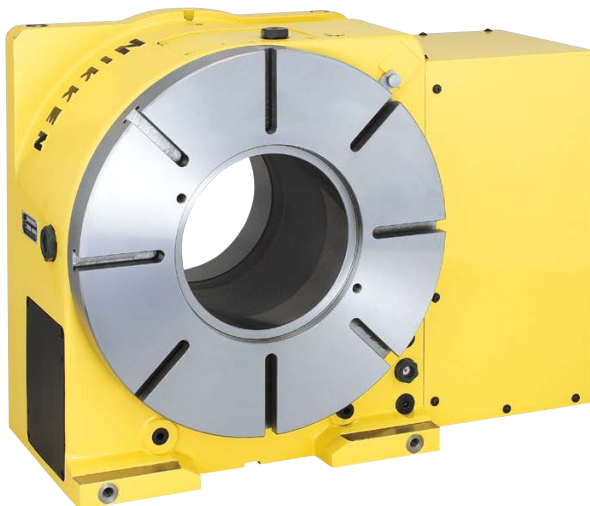


## CNC ROTARY TABLE OPTIONS TO SUIT MAZAK VCS & VTC SERIES MACHINE TOOLS



# CNC ROTARY TABLE CARBIDE WORM SYSTEM

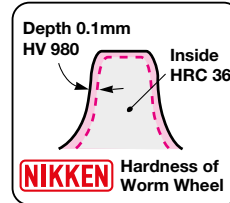
**NIKKEN**

Worldwide Field-proven, NIKKEN CNC Rotary Table  
NIKKEN Carbide Worm Screw System

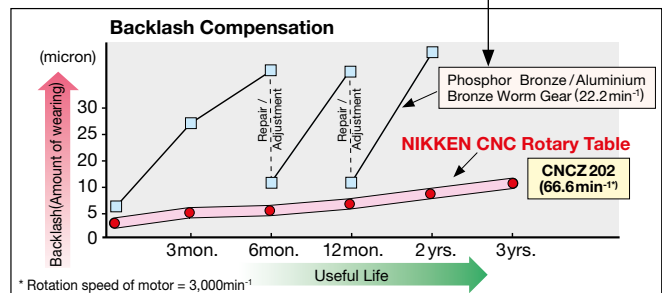


## WORM WHEEL

NIKKEN produce all worm wheels in their CNC Rotary Tables from custom specified steel. During the production process the material is further hardened and ion-nitrided, giving unbeatable performance in service due to exceptional friction-resistance. The tooth surface and core material hardness is shown below.



## Phosphor Bronze Worm Wheel



## CARBIDE WORM SCREW

A unique Carbide Worm Screw, hard and resistant against high speed rotation, is used in NIKKEN CNC Rotary Tables (Photo on right). The Material specification is V grade Carbide with unbeatable anti-wearing and robust qualities. This produces an Ultra heavy duty assembly, maintaining a high degree of accuracy over an extended period of time.

Comparing the NIKKEN system with the traditional combination of worm gear & worm screw used by competitors (phosphor bronze / aluminium bronze worm wheel and steel worm screw), wearing is massively reduced, leading to a far greater effective working life and huge cost reduction.



# Mazak TOOLING PACKAGE OPTIONS

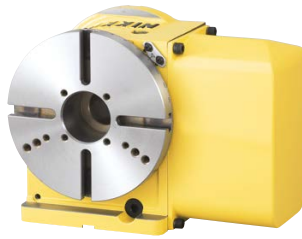
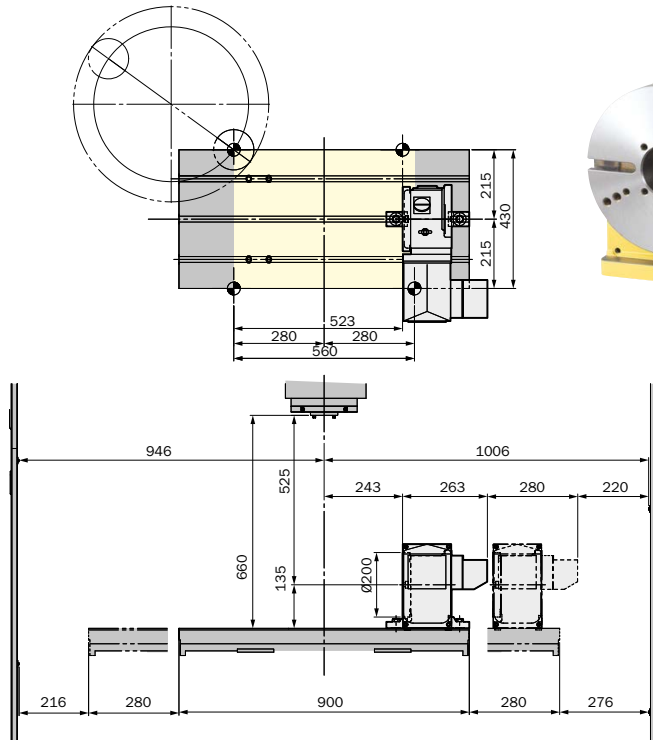
**NIKKEN**

## NIKKEN NC TOOLING

To complement the addition of a NIKKEN CNC Rotary table to your MAZAK Machine tool there are a range of NIKKEN NC Tooling Packages available to ensure you attain the optimum performance from your investment. No matter what materials are being machined, NIKKEN NC Tooling delivers unbeatable performance in terms of speed of manufacture, reliability, accuracy and surface finish with the additional benefit of demonstrable increase in tool life. MAZAK and NIKKEN are partners in precision engineering and work together to ensure that every machine tool specified is ideally suited to its ultimate application in the most cost-effective manner.

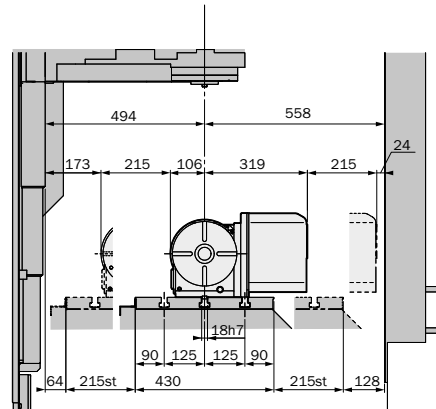


## CNC202MA

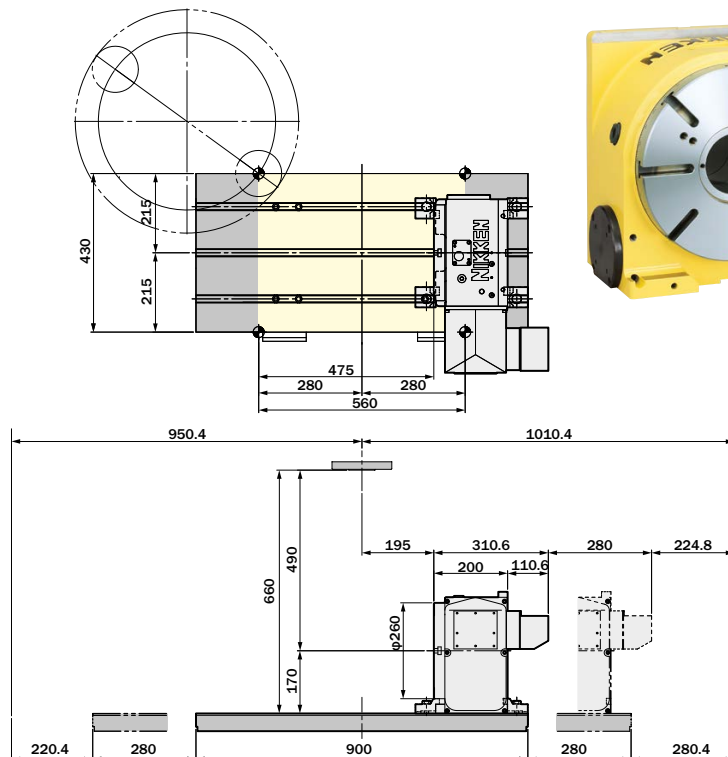


### CNC202MA Specifications

- Diameter of Table Ømm : Ø200
- Max Work Load (kg) : 200(H) 100(V)
- Rotation Speed : 22.2(min<sup>-1</sup>), 44.4(min<sup>-1</sup>)
- Indexing Accuracy (sec) : ±20
- Clamping Torque (Nm) : 303
- Net Weight (kg) : 55
- Motor Type : HF-H104T-A48
- Diameter of Spindle Hole : Ø60h7 Ø40

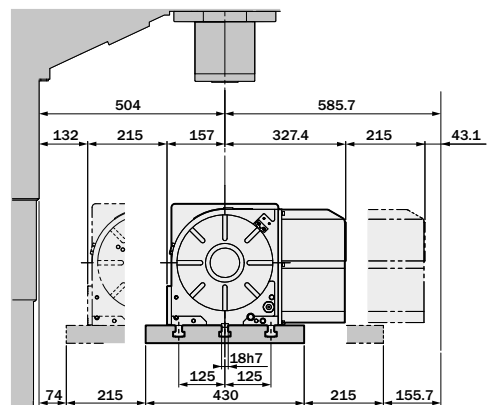


## CNC260MA



### CNC260MA Specifications

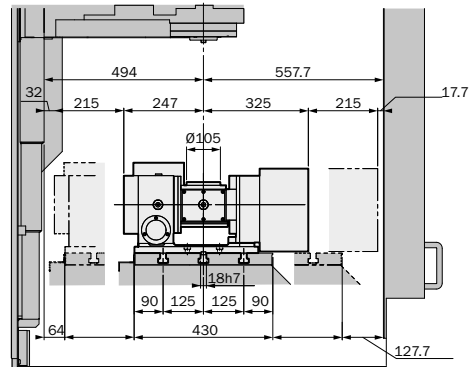
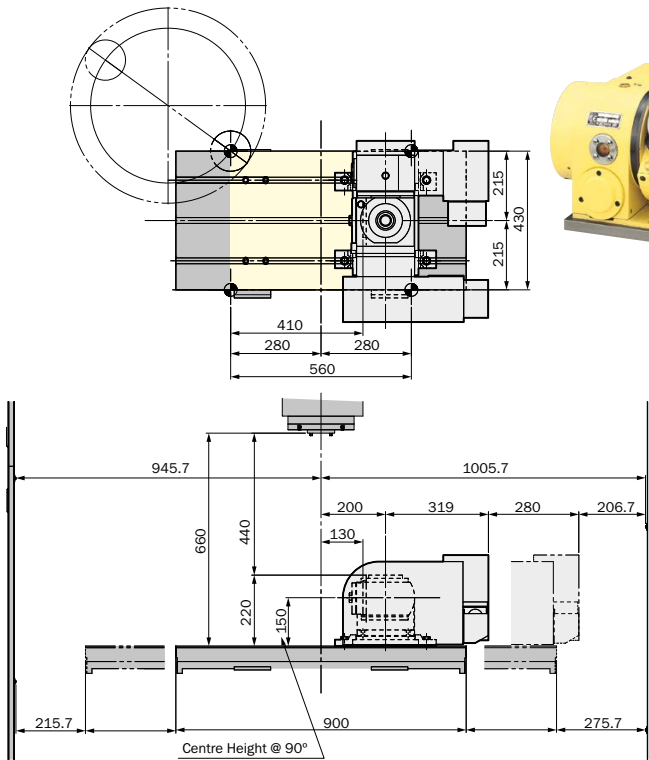
- Diameter of Table Ømm : Ø260
- Max Work Load (kg) : 350(H) 175(V)
- Rotation Speed : 16.6(min<sup>-1</sup>), 33.3(min<sup>-1</sup>)
- Indexing Accuracy (sec) : 20
- Clamping Torque (Nm) : 588
- Net Weight (kg) : 120
- Motor Type : HF-H104T-A48
- Diameter of Spindle Hole : Ø80h7



## 5AX-130MA

### 5AX-130MA Specifications

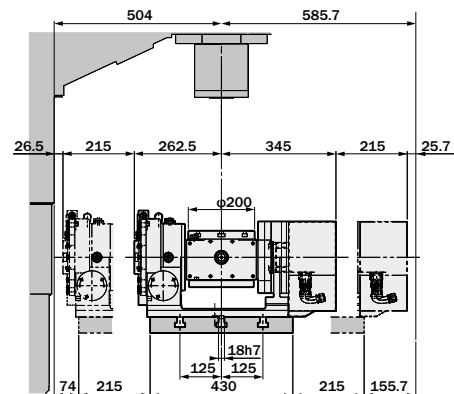
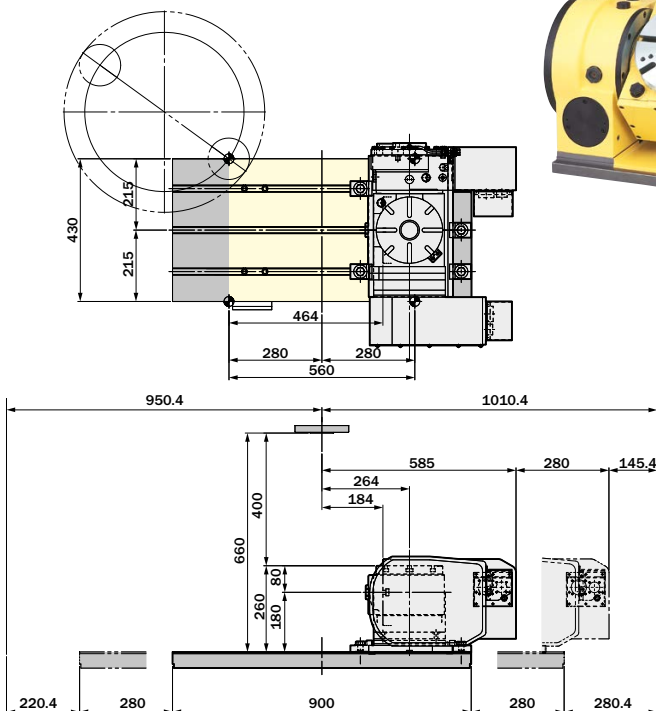
- Diameter of Table Ømm : Ø130
- Max Work Load (kg) : 50(0 to 30°) 25(30° to 90°)
- Rotation Speed : 22.2 min<sup>-1</sup> (Rotary)  
: 11.1 min<sup>-1</sup> (Tilting)
- Indexing Accuracy (sec) : ±30 (Rotary), 60 (Tilting)
- Clamping Torque (Nm) : 205 (Rotary), 303 (Tilting)
- Net Weight (kg) : 115
- Motor Type : HF-H105T-A48 (Rotary)  
: HF-H105T-A48 (Tilting)
- Diameter of Spindle Hole : Ø60H7 Ø30
- Tilting Travel Angle : 0° ~ 105°



## 5AX-201MA

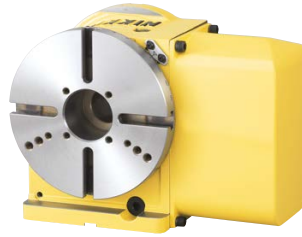
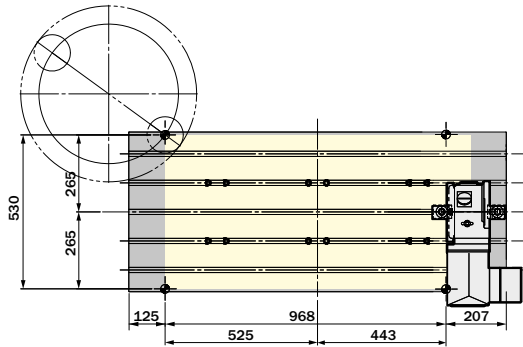
### 5AX-201MA Specifications

- Diameter of Table Ømm : Ø200
- Max Work Load (kg) : 60(0 to 30°) 40(30° to 90°)
- Rotation Speed : 22.2 min<sup>-1</sup> (Rotary)  
: 16.6 min<sup>-1</sup> (Tilting)
- Indexing Accuracy (sec) : 20 (Rotary), 60 (Tilting)
- Clamping Torque (Nm) : 588 (Rotary), 612 (Tilting)  
Clamping System 3.5MPa
- Net Weight (kg) : 160
- Motor Type : HF-H105T-A48 (Rotary)  
: HF-H105T-A48 (Tilting)
- Diameter of Spindle Hole : Ø60H7 Ø50
- Tilting Travel Angle : 0° ~ 105°



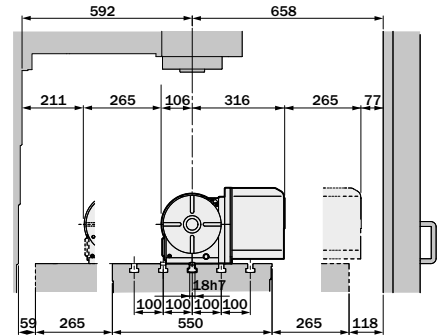
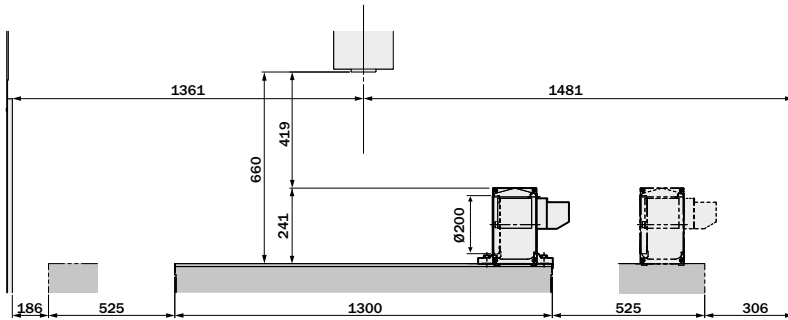


## CNC202MA

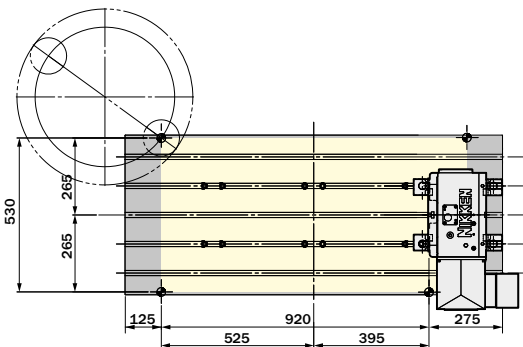


### CNC202MA Specifications

- Diameter of Table Ømm : Ø200
- Max Work Load (kg) : 200(H) 100(V)
- Rotation Speed : 22.2(min<sup>-1</sup>), 44.4(min<sup>-1</sup>)
- Indexing Accuracy (sec) : ±20
- Clamping Torque (Nm) : 303
- Net Weight (kg) : 55
- Motor Type : HF-H104T-A48
- Diameter of Spindle Hole : Ø60H7 Ø40

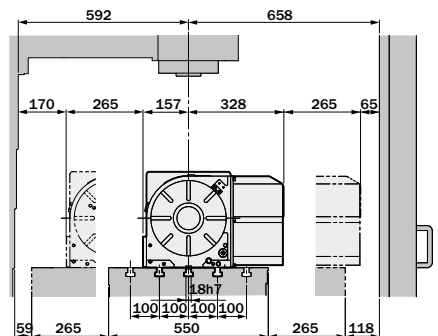
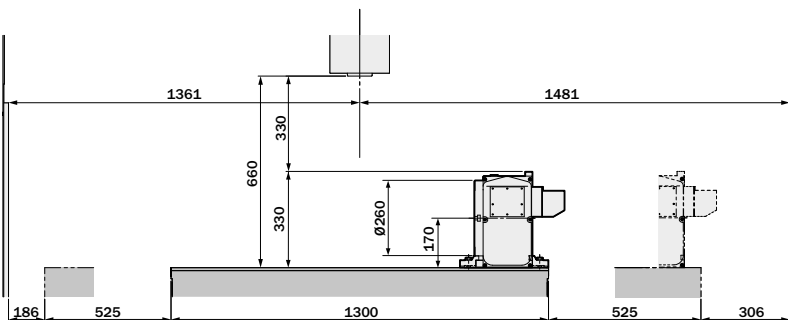


## CNC260MA

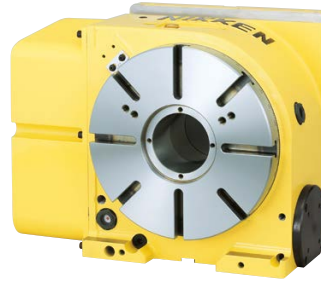
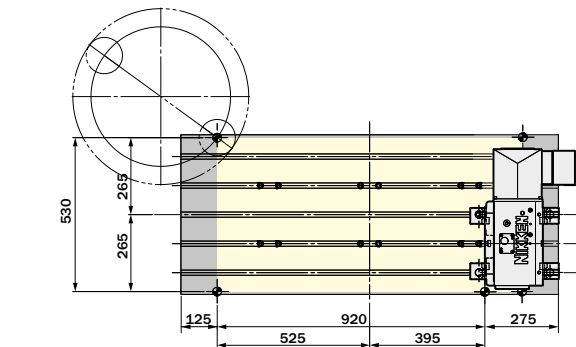


### CNC260MA Specifications

- Diameter of Table Ømm : Ø260
- Max Work Load (kg) : 350(H) 175(V)
- Rotation Speed : 16.6(min<sup>-1</sup>), 33.3(min<sup>-1</sup>)
- Indexing Accuracy (sec) : 20
- Clamping Torque (Nm) : 588
- Net Weight (kg) : 120
- Motor Type : HF-H104T-A48
- Diameter of Spindle Hole : Ø80H7

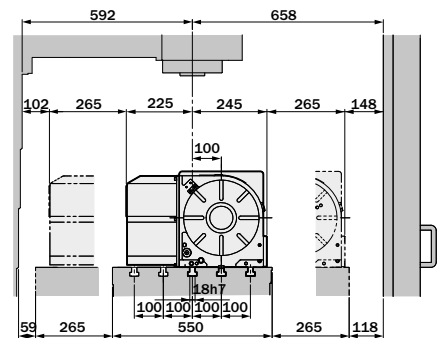
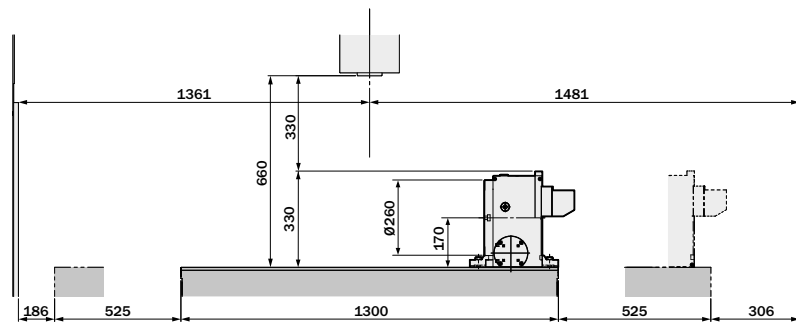


## CNC260LMA

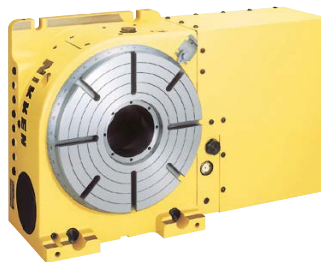
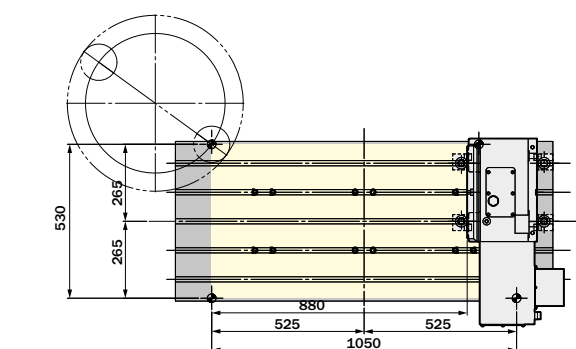


### CNC260LMA Specifications

- Diameter of Table Ømm : Ø260
- Max Work Load (kg) : 350(H) 175(V)
- Rotation Speed : 16.6(min<sup>-1</sup>), 33.3(min<sup>-1</sup>)
- Indexing Accuracy (sec) : 20
- Clamping Torque (Nm) : 588
- Net Weight (kg) : 120
- Motor Type : HF-H104T-A48
- Diameter of Spindle Hole : Ø80H7

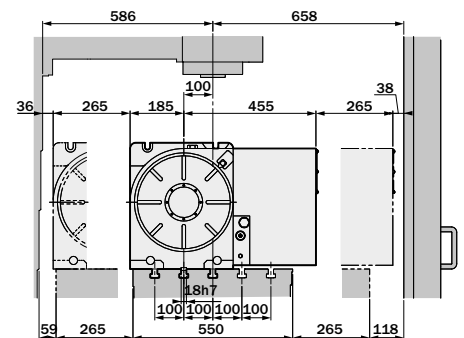
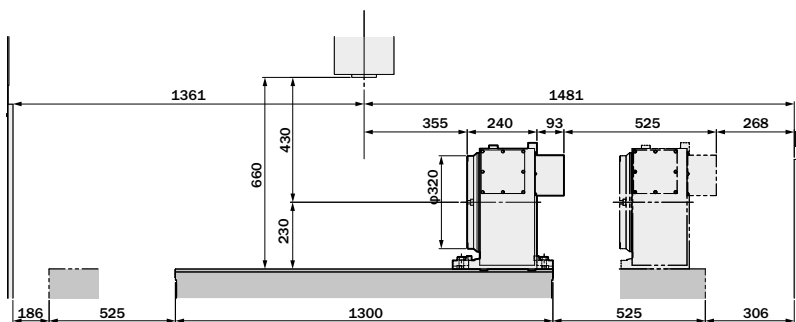


## CNC321MA

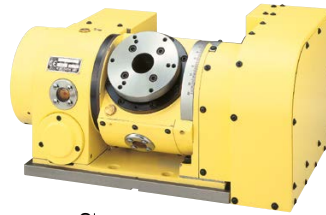
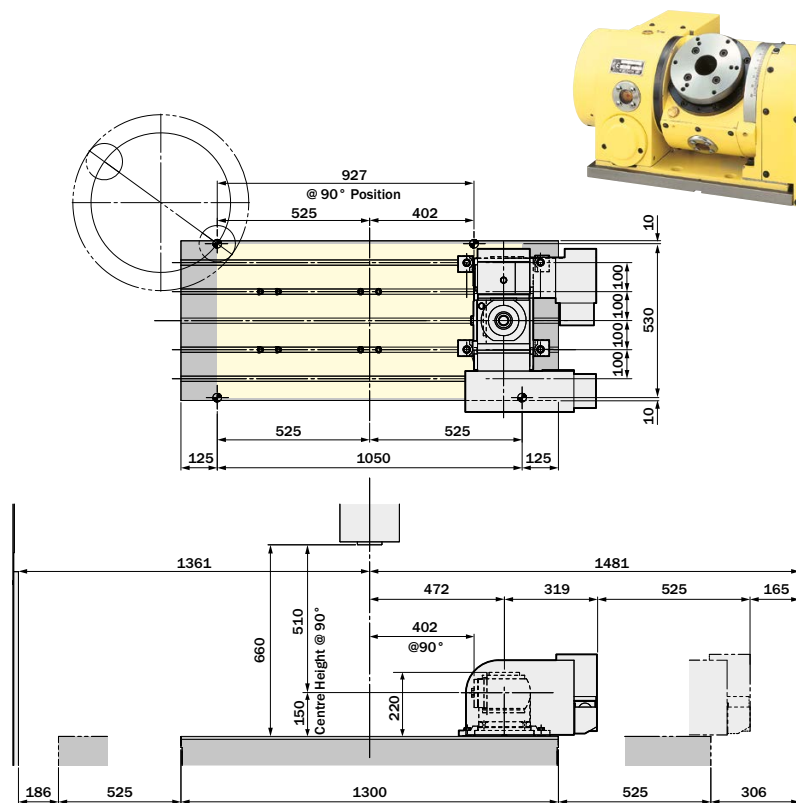


### CNC321MA Specifications

- Diameter of Table Ømm : Ø320
- Max Work Load (kg) : 500(H) 250(V)
- Rotation Speed : 22.2(min<sup>-1</sup>), 44.4(min<sup>-1</sup>)
- Indexing Accuracy (sec) : 15
- Clamping Torque (Nm) : 1760
- Net Weight (kg) : 200
- Motor Type : HF-H204S-A48
- Diameter of Spindle Hole : Ø105H7

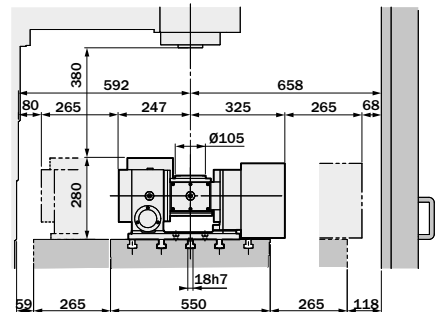


## 5AX-130MA

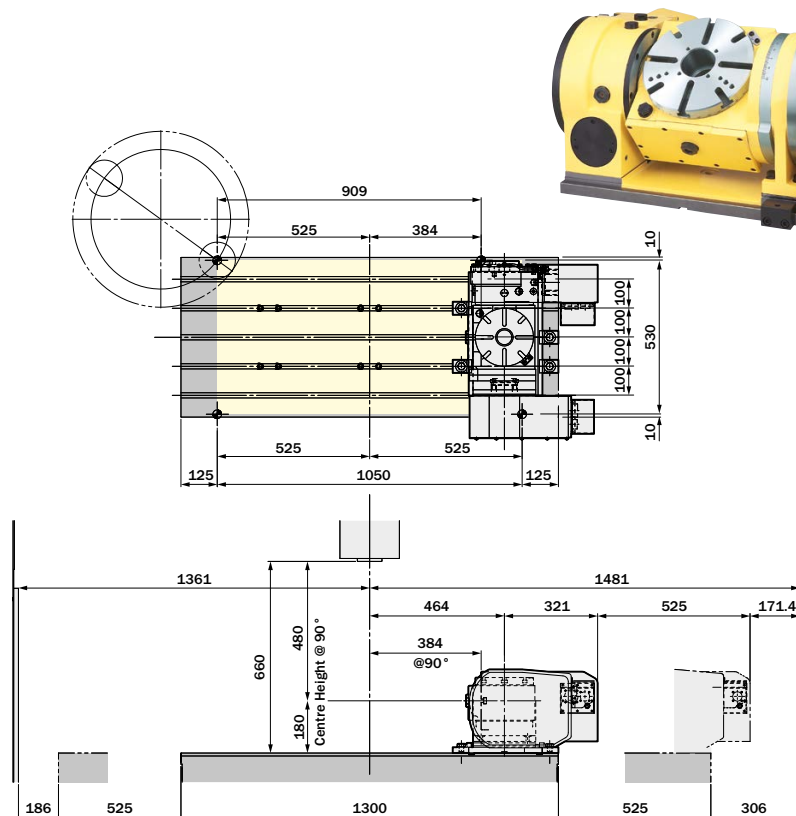


### 5AX-130MA Specifications

- Diameter of Table  $\varnothing$ mm :  $\varnothing 130$
- Max Work Load (kg) : 50(0 to 30°) 25(30° to 90°)
- Rotation Speed : 22.2 min<sup>-1</sup> (Rotary)  
: 11.1 min<sup>-1</sup> (Tilting)
- Indexing Accuracy (sec) :  $\pm 30$  (Rotary), 60 (Tilting)
- Clamping Torque (Nm) : 205 (Rotary), 303 (Tilting)
- Net Weight (kg) : 115
- Motor Type : HF-H105T-A48 (Rotary)  
: HF-H105T-A48 (Tilting)
- Diameter of Spindle Hole :  $\varnothing 60_{H7} \varnothing 30$
- Tilting Travel Angle : 0° ~ 105°

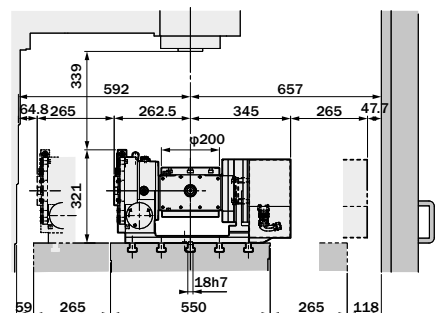


## 5AX-201MA



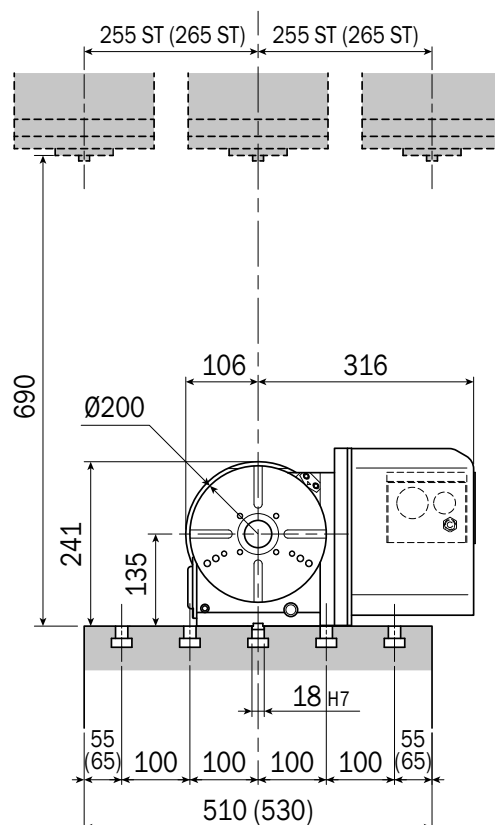
### 5AX-201MA Specifications

- Diameter of Table  $\varnothing$ mm :  $\varnothing 200$
- Max Work Load (kg) : 60(0 to 30°) 40(30° to 90°)
- Rotation Speed : 22.2 min<sup>-1</sup> (Rotary)  
: 16.6 min<sup>-1</sup> (Tilting)
- Indexing Accuracy (sec) : 20 (Rotary), 60 (Tilting)
- Clamping Torque (Nm) : 588 (Rotary), 612 (Tilting)  
Clamping System 3.5MPa
- Net Weight (kg) : 160
- Motor Type : HF-H105T-A48 (Rotary)  
: HF-H105T-A48 (Tilting)
- Diameter of Spindle Hole :  $\varnothing 60_{H7} \varnothing 50$
- Tilting Travel Angle : 0° ~ 105°





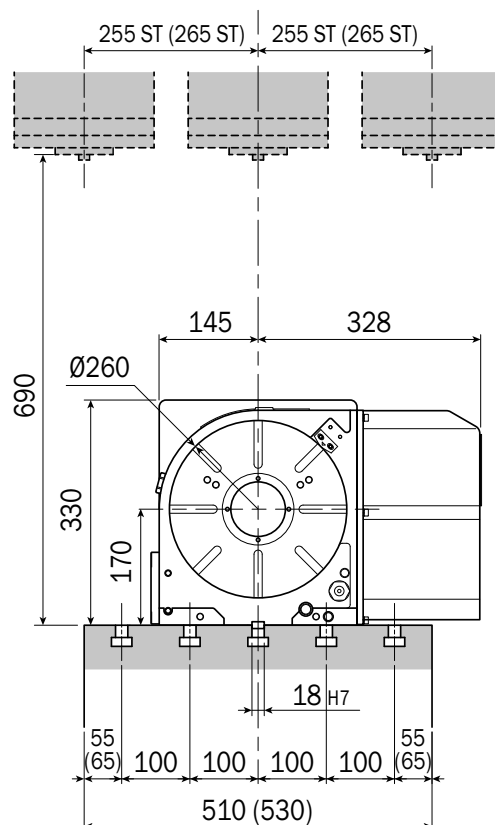
- Diameter of Table Ømm : Ø200
  - Max Work Load (kg) : 200(H) 100(V)
  - Rotation Speed : 22.2(min<sup>-1</sup>), 44.4(min<sup>-1</sup>)
  - Indexing Accuracy (sec) : ±20
  - Clamping Torque (Nm) : 303
  - Net Weight (kg) : 55
  - Motor Type : HF-H104T-A48
  - Diameter of Spindle Hole : Ø60<sub>H7</sub> Ø40
- CNC Rotary Tables for VTC-200C-II and VTC-530C are dimensionally identical but not interchangeable due to differences in electrical specification.



VALUES (IN BRACKETS) ARE VTC-530C



- Diameter of Table Ømm : Ø260
  - Max Work Load (kg) : 350(H) 175(V)
  - Rotation Speed : 16.6(min<sup>-1</sup>), 33.3(min<sup>-1</sup>)
  - Indexing Accuracy (sec) : 20
  - Clamping Torque (Nm) : 588
  - Net Weight (kg) : 120
  - Motor Type : HF-H104T-A48
  - Diameter of Spindle Hole : Ø80H7
- CNC Rotary Tables for VTC-200C-II and VTC-530C are dimensionally identical but not interchangeable due to differences in electrical specification.



VALUES (IN BRACKETS) ARE VTC-530C



# Mazak CNC ROTARY TABLE OPTIONS

## VTC-300C-II & VTC-760C

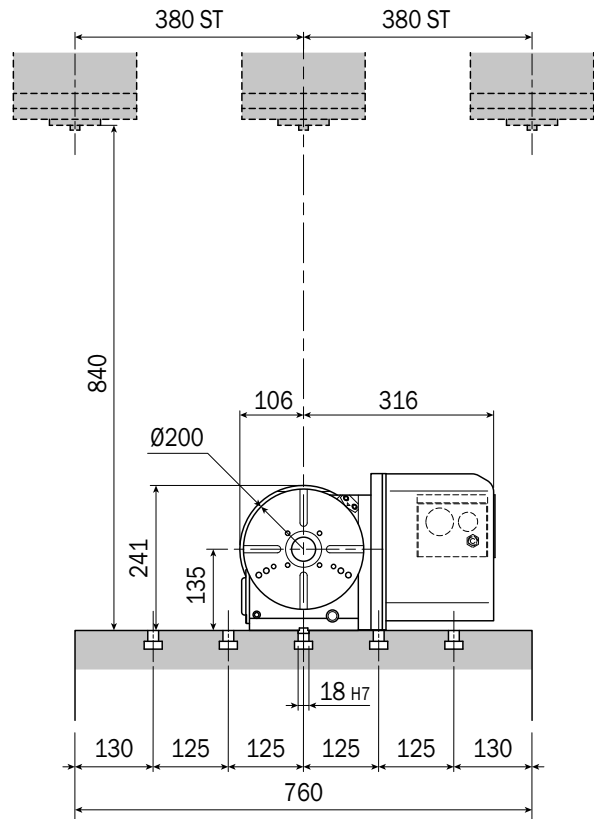
**NIKKEN**

### CNC202MA



#### CNC202MA Specifications

- Diameter of Table Ømm : Ø200
  - Max Work Load (kg) : 200(H) 100(V)
  - Rotation Speed : 22.2(min<sup>-1</sup>), 44.4(min<sup>-1</sup>)
  - Indexing Accuracy (sec) : ±20
  - Clamping Torque (Nm) : 303
  - Net Weight (kg) : 55
  - Motor Type : HF-H104T-A48
  - Diameter of Spindle Hole : Ø60<sub>H7</sub> Ø40
- CNC Rotary Tables for VTC-300C-II and VTC-760C are dimensionally identical but not interchangeable due to differences in electrical specification.

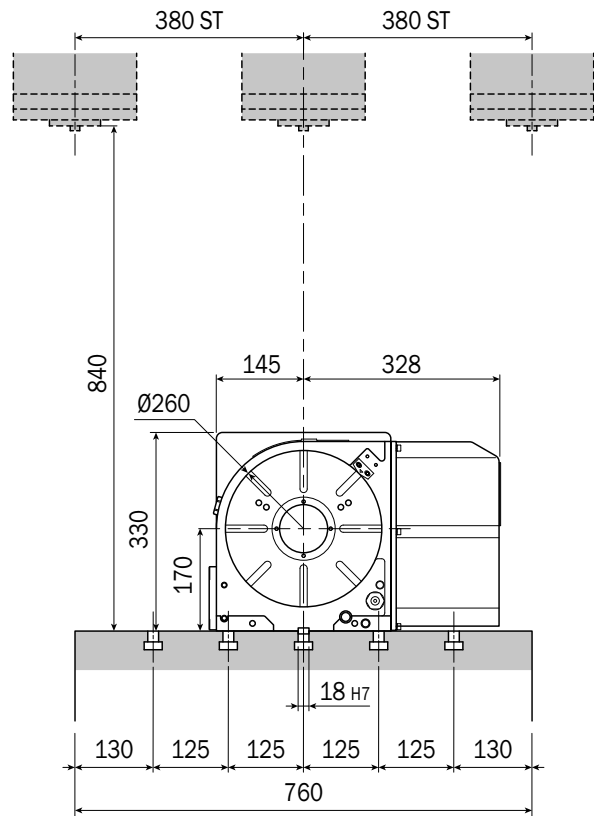


### CNC260MA



#### CNC260MA Specifications

- Diameter of Table Ømm : Ø260
  - Max Work Load (kg) : 350(H) 175(V)
  - Rotation Speed : 16.6(min<sup>-1</sup>), 33.3(min<sup>-1</sup>)
  - Indexing Accuracy (sec) : 20
  - Clamping Torque (Nm) : 588
  - Net Weight (kg) : 120
  - Motor Type : HF-H104T-A48
  - Diameter of Spindle Hole : Ø80<sub>H7</sub>
- CNC Rotary Tables for VTC-300C-II and VTC-760C are dimensionally identical but not interchangeable due to differences in electrical specification.



# Mazak CNC ROTARY TABLE OPTIONS

## VTC-300C-II & VTC-760C

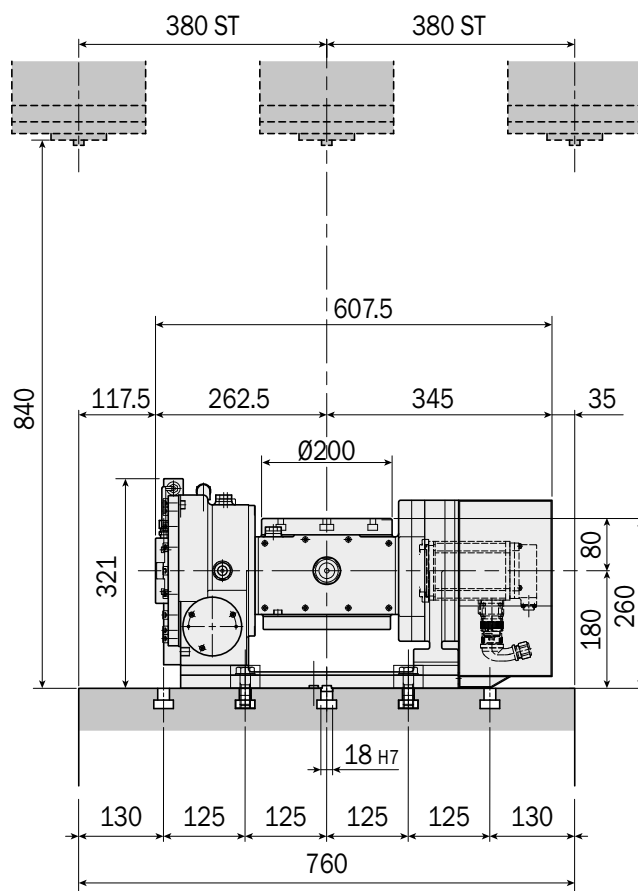
**NIKKEN**

### 5AX-201MA



#### 5AX-201MA Specifications

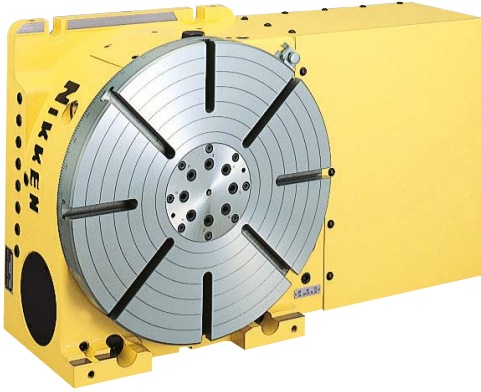
- Diameter of Table Ømm : Ø200
  - Max Work Load (kg) : 60(0 to 30°) 40(30° to 90°)
  - Rotation Speed : 22.2 min<sup>-1</sup> (Rotary)  
: 16.6 min<sup>-1</sup> (Tilting)
  - Indexing Accuracy (sec) : 20 (Rotary), 60 (Tilting)
  - Clamping Torque (Nm) : 588 (Rotary), 612 (Tilting)  
Clamping System 3.5MPa
  - Net Weight (kg) : 160
  - Motor Type : HF-H105T-A48 (Rotary)  
: HF-H105T-A48 (Tilting)
  - Diameter of Spindle Hole : Ø60H7 Ø50
  - Tilting Travel Angle : 0° ~ 105°
- CNC Rotary Tables for VTC-300C-II and VTC-760C are dimensionally identical but not interchangeable due to differences in electrical specification.



### MAZAK VTC-300C-II

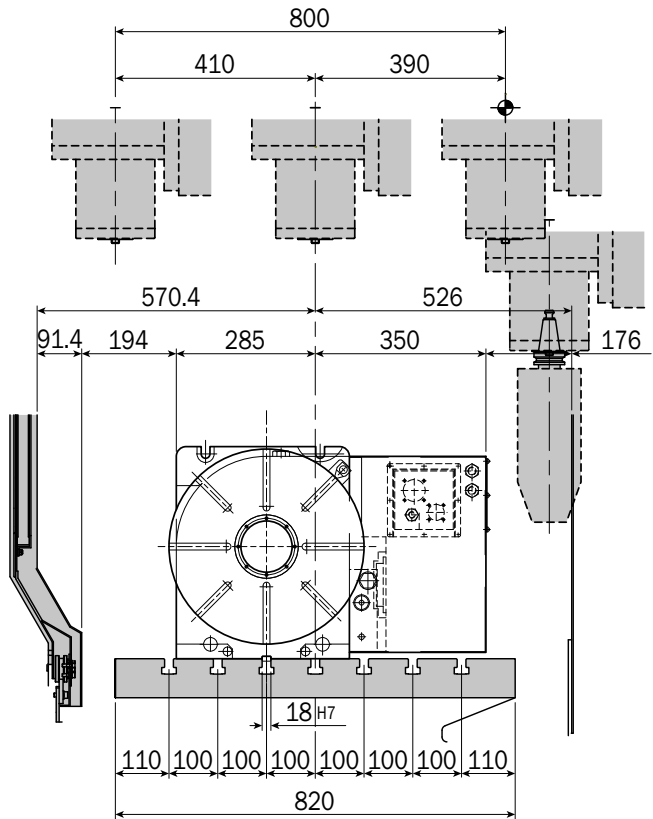


# CNC401MA

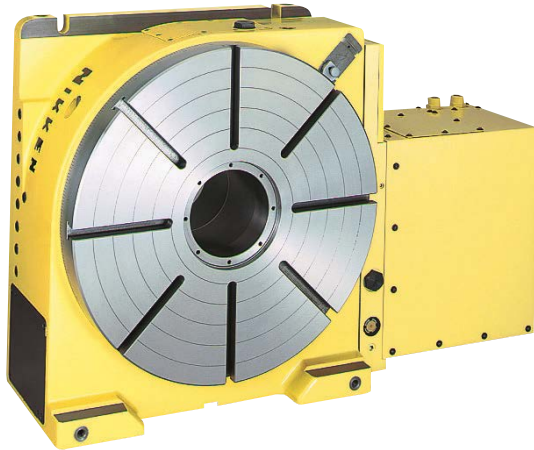


## CNC401MA Specifications

- Diameter of Table Ømm : Ø400
- Max Work Load (kg) : 500(H) 250(V)
- Rotation Speed : 22.2(min<sup>-1</sup>), 44.4(min<sup>-1</sup>)
- Indexing Accuracy (sec) : 15
- Clamping Torque (Nm) : 1760
- Net Weight (kg) : 230
- Motor Type : HF-H204S-A48
- Diameter of Spindle Hole : Ø105H7

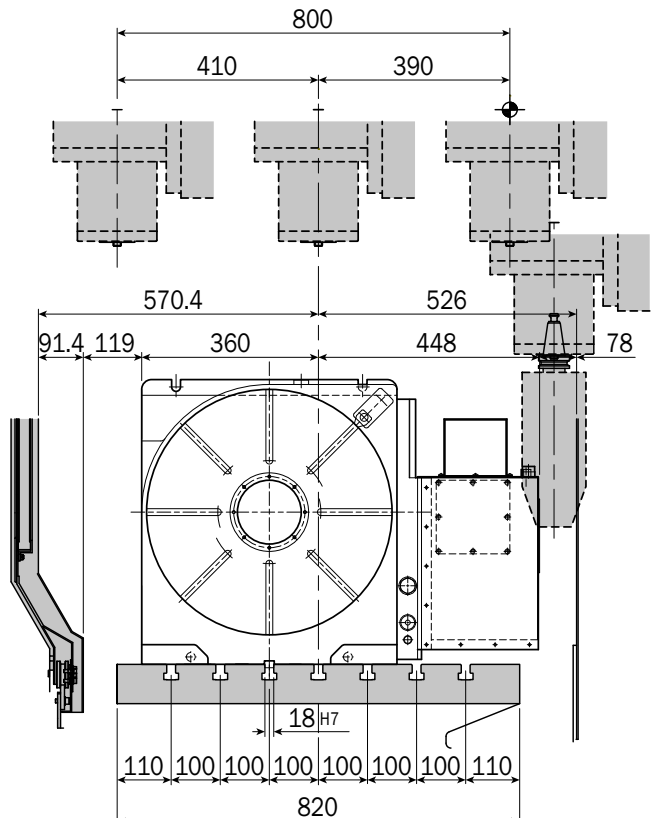


# CNC501MA

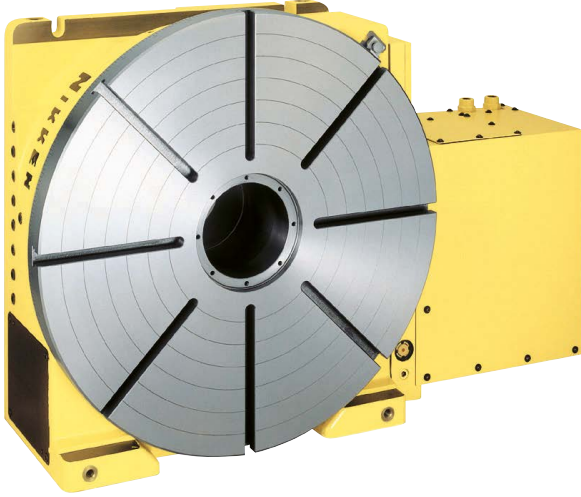


## CNC501MA Specifications

- Diameter of Table Ømm : Ø500
- Max Work Load (kg) : 800(H) 400(V)
- Rotation Speed : 16.6(min<sup>-1</sup>), 33.3(min<sup>-1</sup>)
- Indexing Accuracy (sec) : 15
- Clamping Torque (Nm) : 4,655
- Net Weight (kg) : 470
- Motor Type : HF-H354S-A48
- Diameter of Spindle Hole : Ø130H7

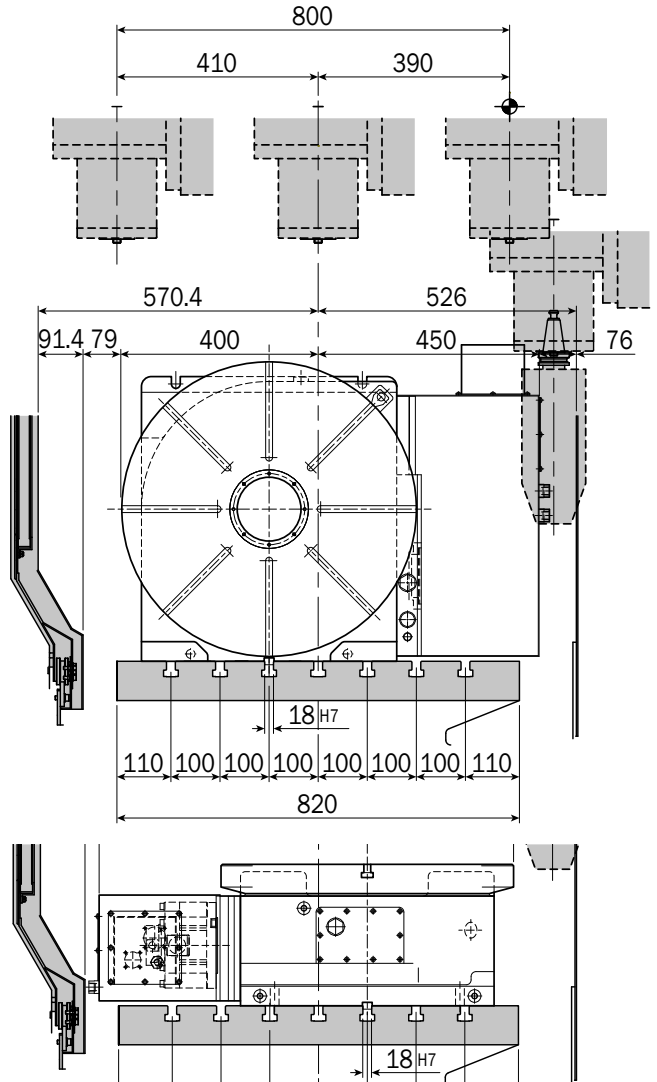


## CNC601MA

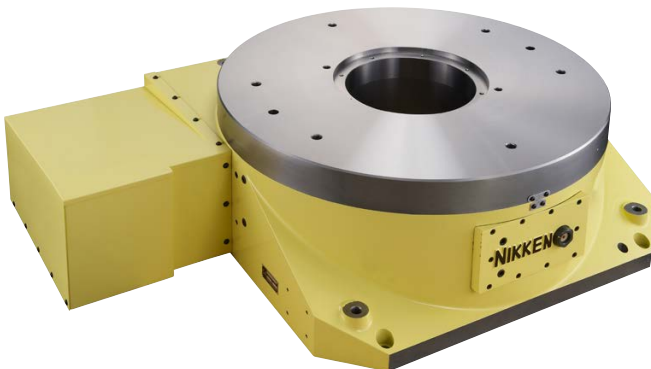


### CNC601MA Specifications

- Diameter of Table Ømm : Ø600
- Max Work Load (kg) : 800(H) 400(V)
- Rotation Speed : 11.1(min<sup>-1</sup>), 22.2(min<sup>-1</sup>)
- Indexing Accuracy (sec) : 15
- Clamping Torque (Nm) : 4,655
- Net Weight (kg) : 500
- Motor Type : HF-H354S-A48
- Diameter of Spindle Hole : Ø130H7

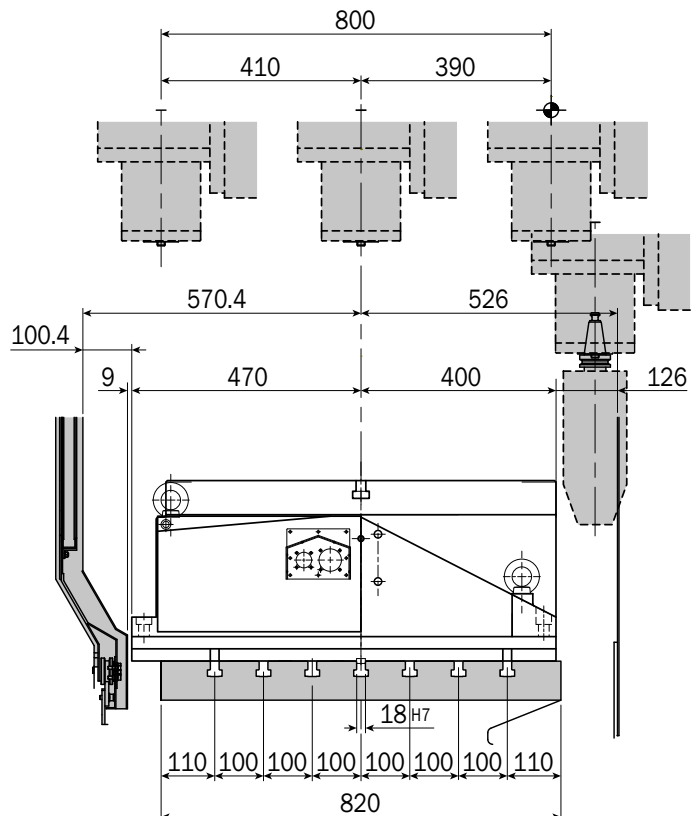


## CNC802MA

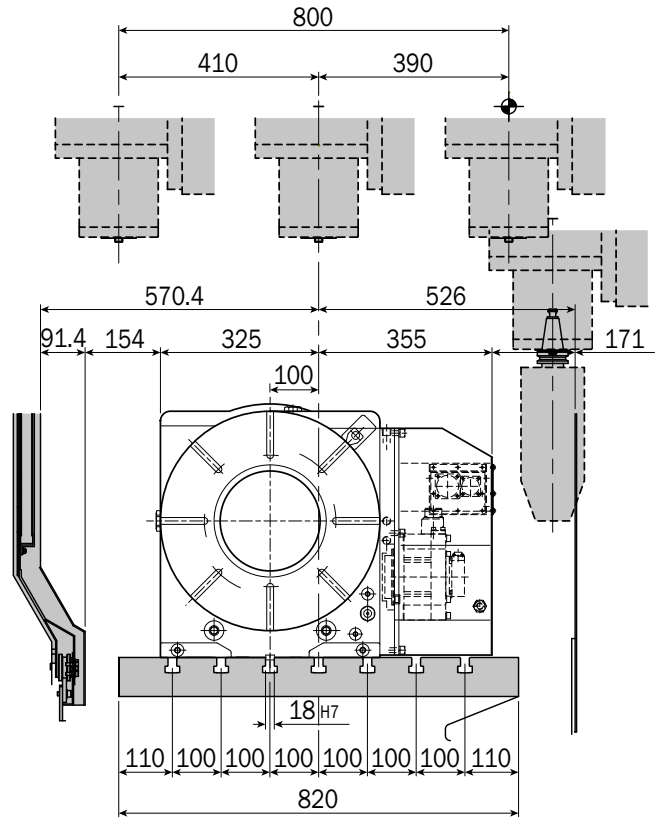


### CNC802MA Specifications

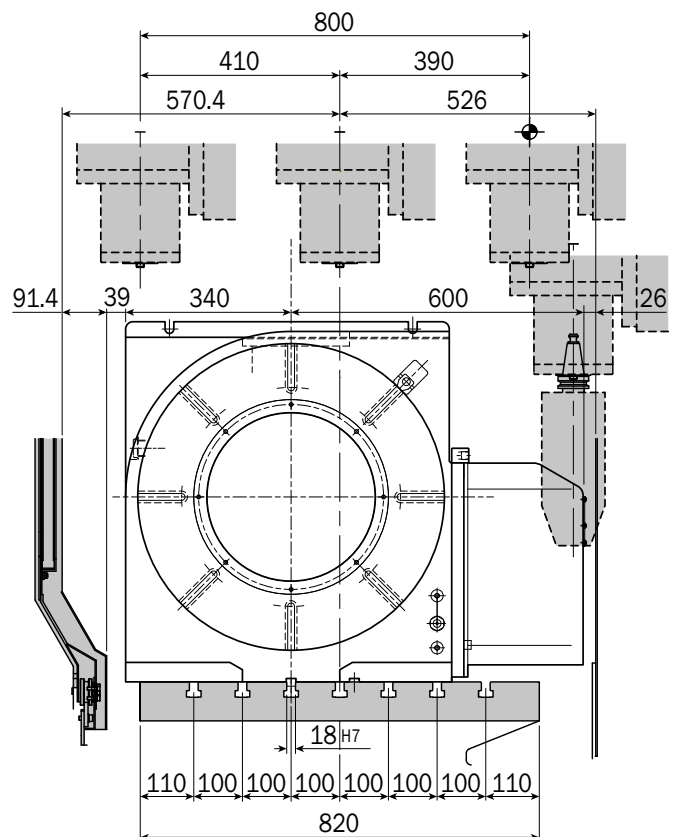
- Diameter of Table Ømm : Ø800
- Max Work Load (kg) : 3,000(H)
- Rotation Speed : 5.5(min<sup>-1</sup>)
- Indexing Accuracy (sec) : 15
- Clamping Torque (Nm) : 7,000
- Net Weight (kg) : 1,100
- Motor Type : HF-H354S-A48
- Diameter of Spindle Hole : Ø270H7



- Diameter of Table Ømm : Ø450
- Max Work Load (kg) : 700(H) 350(V)
- Rotation Speed : 25(min<sup>-1</sup>)
- Indexing Accuracy (sec) : 15
- Clamping Torque (Nm) : 3,870
- Net Weight (kg) : 380
- Motor Type : HF-H204S-A48
- Diameter of Spindle Hole : Ø205<sub>H7</sub>



- Diameter of Table Ømm : Ø630
- Max Work Load (kg) : 1600(H) 800(V)
- Rotation Speed : 11.1(min<sup>-1</sup>), 22.2(min<sup>-1</sup>)
- Indexing Accuracy (sec) : 15
- Clamping Torque (Nm) : 6,550
- Net Weight (kg) : 750
- Motor Type : HF-H354S-A48
- Diameter of Spindle Hole : Ø345H7





## SCROLL CHUCKS & CHUCK PLATES

Chuck Plate

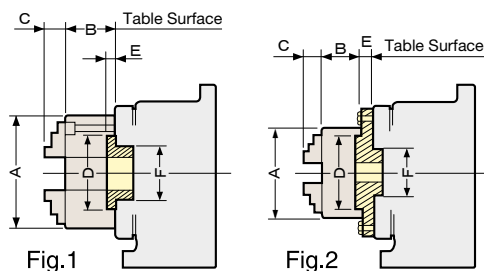
Scroll Chuck



### Chucking Range

Chuck Size	Range	
	External	Internal
4"	2~ 89	36~ 78
5"	3~104	42~ 92
6"	3~135	52~119
7"	3~153	56~134
9"	4~190	64~169
10"	10~229	72~208
12"	10~258	82~238

This is the actual gripping range not jaw stroke.



### List of Scroll Chuck & Chuck Plate

Scroll Chuck	4"	5"	6"	7"	9"	10"	12"
CNC202		X-5C*	X-6B*	X-7A*			
CNC260			X-6G*	X-7L*	X-9H		
CNC321, 401				X-7N, 7K <sup>*2</sup>	X-9K, 9D <sup>*2</sup>	X-10G, 10D <sup>*2</sup>	X-12F, 12G <sup>*2</sup>
CNC501, 601					X-9D	X-10	X-12B
5AX-130	X-4B						
5AX-201	X-4B	X-5C*	X-6B*	X-7A*			

- Scroll Chucks with chuck plate marked \* are NIKKEN Scroll Chuck of Front Mounting (Fig.1)
- Chuck plate marked \*2 are used for Ø400 table.
- The chuck plates for the scroll chucks without \* can be used for the scroll chuck based on JIS B6151 SC/TC standard.
- NIKKEN Scroll Chuck is used for X-4B

### Front End Dimensions with Scroll Chuck & Chuck Plate

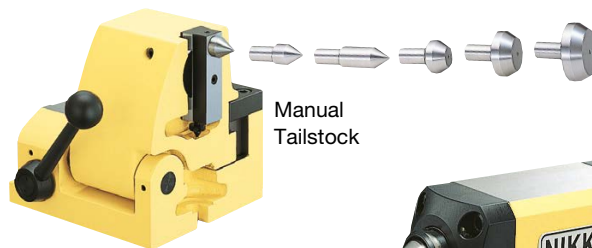
Chuck Size	Chuck Plate Code No.	A	B	C	D	E	F	Fig. No.
4"	X-4B	112	58	31.75	80	13	60	2
5"	X-5C*	132	60	37.25	100	3.5	60	1
6"	X-6B*	167	66	44.25	130	4	60	2
	X-6G*					4	80	1
7"	X-7A*, X-7L*	192	75	46.25	155	4	60, 80	2
	X-7K, 7N					16	105	1
9"	X-9D	233	82	55.25	190	20	130, 60	2
	X-9H					25	80	
	X-9J, 9K					18	80, 105	
10"	X-10	274	86	53.25	230	20	130, 70, 75	2
	X-10D, 10G					20	105	
12"	X-12B, X-12G	310	92	59.25	260	20	75, 130	2
	X-12F-1					25	80, 105	

★The dimension from the table surface to the jaw is: B+C\* Others: E+B+C

## TAT501 SUPPORT TABLE COMPLETE WITH HYDRAULIC BRAKE, TO WORK IN CONJUNCTION WITH CNC501, CNC601 & CNCB630



## TAILSTOCK (MANUAL, AIR, HYDRAULIC, SUPPORT TABLE)

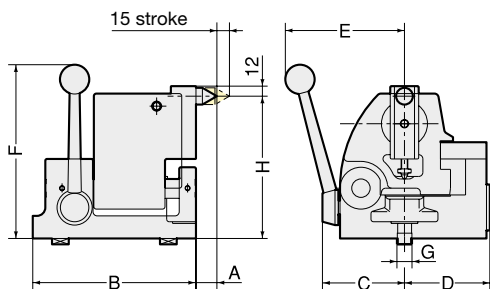


Manual Tailstock

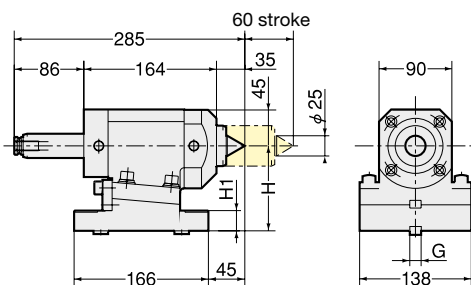


Air/Hyd. Tailstock

### TAT401N SUPPORT TABLE COMPLETE WITH HYDRAULIC BRAKE, TO WORK IN CONJUNCTION WITH CNC321, CNC401 & CNCB450



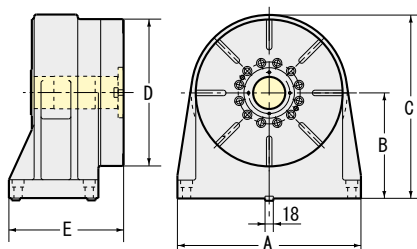
The centre height can be adjusted. Please refer Centre Height H on the table.



The centre height can be adjusted within 0.35mm.

Table without T slot (-N) is standard.  
Table with T slot is available as an option.

#### TAT401-N



Hydraulic ports are 2 x Rc3/8. Solenoid valve and clamp/unclamp confirmation switches are not included.

### List of Tailstock and Support Table

Table Model	Tailstock Centre Height	Manual	Air/Hyd. Tailstock	Support Table
		Stroke: 15mm	Stroke: 60mm	Built-in Brake (Hyd.)
CNC202	135	P-125S	PBA-135	TAT170
CNC260	170	P-170S	PBA-170	TAT250
CNC321, 401	230	P-230S		TAT321, 401
CNC501, 601	310	P-310S		TAT501, 600
5AX-130	150	P-150S	PBA-150	
5AX-201	180	P-170S	PBA-180	

### Dimension of Manual Tailstock

Code No.	Centre Height H	A	B	C	D	E	F	G	Weight (kg)
P-125S	130~140	27	150	76	74	120	210	14	11.5
P-150S	145~160	25	195	98	102	145	210	18	22
P-170S	160~180	25	195	98	102	145	210	18	22.5
P-230S	220~240	25	195	98	102	145	250	18	27
P-310S	300~310	15	235	103	124	145	330	20	41.5

★ Left handed tailstocks are available in all sizes.

★ For P-150S or larger size tailstocks, 5 pcs of changeable centres are included.

### Air/Hyd. both usable Small Size Tailstock

Code No.	Centre Height H	H <sub>1</sub>	G	Thrust (N)		Weight (Kg)
				Air 0.5MPa	Hyd. 2MPa	
PBA-135	135	55	14	1176	4733	20
PBA-150	150	70	18	1176	4733	22
PBA-170	170	90	18	1176	4733	24.5
PBA-180	180	100	18	1176	4733	25.5

★ Rotary centre is built-in.

★ MT (Morse Taper) type quill is also available. Please contact us.

★ The different length of the stroke is available. Please contact us.

### Support Table TAT

Code No.	A	B	C	D	E	Clamping System	Brake Torque	Weight
TAT401	400	230	430	400	250	Hyd.	1470	140
TAT501	480	310	560	500	250	Hyd.	1470	200

★ Hydraulic pressure is 3.5MPa.

★ Rotary joint is available for all models

(Nm) (kg)

NIKKEN and Mazak have a long history of collaborating on complex engineering projects and share a common ethos and passion for excellence. In the NIKKEN Innovation Centre Europe there are a range of machine tools, including a Mazak INTEGREX i-300 where applications and processes are developed, pushing the boundaries of modern High Value Manufacture to the next level. Visit the NIKKEN website or contact your local NIKKEN branch to find out more.



**NIKKEN Innovation Centre and  
Mazak INTEGREX i-300 at the  
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**NIKKEN Euro Centre (UK)**

## NIKKEN Innovation Centre Europe (NICE)

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