



**HSU PEN** INTERNATIONAL  
PRECISION MACHINERY

# CNC ROTARY TABLE

AN EXPERT IN ROTARY TABLE



HIGH PRECISION • HIGH RIGIDITY •  
HIGH STABILITY



## 1963 COMPANY ESTABLISHED JIN FENG INDUSTRIAL COMPANY

HSU PEN International Precision Machinery Co., Ltd. was established in 1963 by the former president, C. Y. Chang. The original company name was "Jin Feng Industrial Company". At the beginning stage, the company specialized in the manufacture of household rice milling machine, C. Y. Chang was dedicated to upgrading technology and entered into the production of paper-making machinery to meet the Taiwan's economic trend, including the copper rollers of pulp grinding machine and paper making machine with 50% of market share.

since  
**1963**

## 1976 COMPANY RECONSTRUCTED AS HSU PEN MACHINERY INDUSTRIAL CO., LTD.

HSU PEN began exporting rice milling machines to worldwide market, including South-east Asia, Central and South America and Africa. Meantime, HSU PEN entered into the manufacturing of machine tool (turret type milling machine). Additionally, with the prosperous growth of the shoes industry in Taiwan. HSU PEN has also stepped into the production of shoes making machines with 50 years of history up to now in this sector.

## 1988 PRESENTED CARBON FIBER PRODUCTION EQUIPMENT

HSU PEN set up an independent carbon fiber technical team for developing the first unit of Double Roller Weaving Machine for serving the Taiwan's composite material industry. This machine is designed for production of tennis racket, badminton racket, carbon fiber frame of bicycle and related products. Currently HSU PEN is the largest manufacturer in Taiwan for immersed type carbon fiber double roller weaving machine and special purpose machines for carbon fiber products.

## 1995 LAUNCHED INTO PRODUCTION OF WOODWORKING MACHINERY

With an aim to meet the market trend and the flourish of the furniture industry, HSU PEN launched into production of traditional tenon jointer, dovetail tenon & mortise jointer, rectangular tenon jointer and rectangular mortise jointer. The quality of each series of machine has reached the international level.

# CNC ROTARY TABLE

## Outstanding R&D Team

At HSU PEN, we have an outstanding R&D team who constantly developed various new products. Moreover, with our concepts of customer priority, quality assurance, specialized manufacturing as well as rigorous quality control, we are confident that each product from HSU PEN will fully meet customers' requirements.

## Global Sales Network

HSU PEN not only spends great efforts in presenting a wide range of CNC rotary tables, but also offers customers various woodworking machines, such as CNC Tenon Jointer, Continuous Dovetail Tenon & Mortise Jointer, Rectangular-tenon Jointer. Besides, we also produce carbon fiber immersing machine applied for production of carbon fiber tennis racket, carbon fiber bicycle frame and related composite material and carbon fiber products. HSU PEN products have been sold to a wide range of countries, such as U.S.A., Mexico, Italy, Spain, Egypt, China, Korea, Singapore, Malaysia, Indonesia, Vietnam, Burma, India, Iran and Pakistan, etc.

## Versatile Product Strategy

With our outstanding R&D capabilities combined with versatile technical background and rigorous quality control, we always strive hard for establishing a world-dependable brand name.

HSU PEN's versatile technical departments include:

- CNC rotary table department
- Special purpose machines for carbon fiber department
- Woodworking machinery department

## 2001 PRODUCTION OF CNC WOODWORKING EQUIPMENT

With the trend of the times and the traditional machinery production is in short supply, HSU PEN has been dedicated to develop the CNC tenon jointer and CNC tenon/ mortise complex machine. In 2006, Hsu Pen developed the first CNC double ends rectangular tenon jointer in Taiwan which has been widely recognized by customers.

## 2010 DESIGN AND MANUFACTURING OF CNC ROTARY TABLE

Under the leadership of General Manager, S. J. Chang, HSU PEN set up a R&D center for the development of CNC rotary table. Based on the years of understanding and technical experience in the field of rotary table in combination with heavy investment of capital and efforts, HSU PEN has dedicated to the development of rotary table. Currently, in addition to the existing 4th axis rotary tables, HSU PEN also aggressively develop the 5th rotary tables and special models. With their outstanding accuracy and structural rigidity, HSU PEN products have been fully recognized by all customers.

## 2015 STEADY PLAY. INSISTING ON QUALITY.

HSU PEN has been established for about 5 years, and has always insisted on quality, performance and dependability of accuracy. HSU PEN has received wide response from the users. HSU PEN 5-axis rotary table has reached a mature condition and machining accuracy fully meet customers' requirements. HSU PEN brand name is designated by some customers and recognized by customers.

## Precision Parts Machining Assures High Accuracy of Rotary Table

The parts of Hsu Pen rotary table are precision machined by using the sophisticated machine tools. For example : the body of rotary table is machined by Japanese Mazak horizontal machining center. Therefore, the accuracy of Hsu Pen rotary table will fully meet customer's requirement.



## Rigorous Quality Inspection

Insisting on quality is Hsu Pen's unwavering concept. At Hsu Pen, we are committed to offer the best quality of rotary table. Rigorous quality control is conducted throughout the entire manufacturing process from parts machining, assembling to finished product test, etc. Our objective is to reduce quality defect to a minimum. In addition, our quality control department applies the advanced laser instrument to inspect the indexing accuracy of rotary table.



Renishaw laser instrument is applied for inspecting indexing accuracy.



Two-dimensional measuring device

## Japanese Made Worm/Worm Gear (Optional)

**High Positioning Accuracy !  
Long Service Life !**

HSU PEN employs Japan-imported worm/ worm gear, featuring high precision, maximum wear-resistance and long service life.

### Material:

**WORM GEAR:** High tensile strength aluminum bronze alloy (ALBC3)

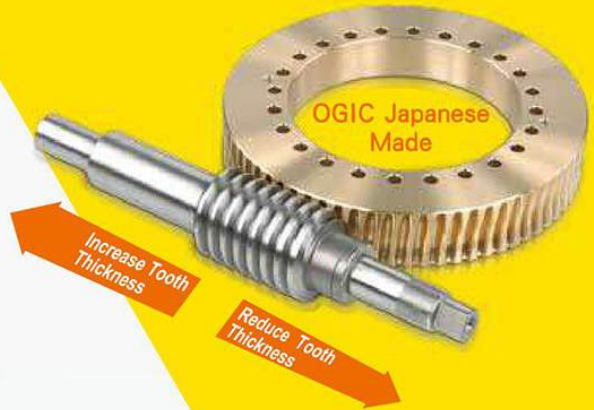
**WORM:** Nickel Chrome Molybdenum alloy steel (SNCM21), normalized and carburized to HRC  $60^{\circ} \pm 1^{\circ}$ .

### Features:

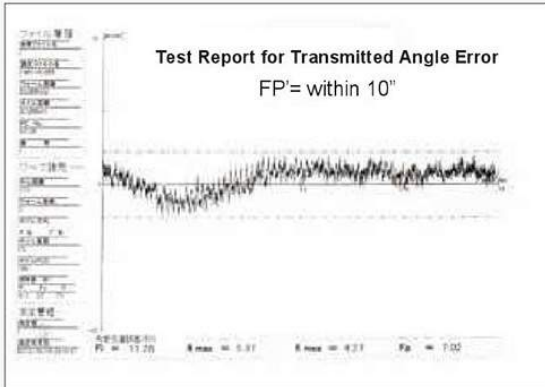
Maximum stability and wear resistance. Increased tooth depth and contact surface strength of worm gear. Double lead worm shaft features small adjustment backlash, high torque and big contact surface.

### Easy To Adjust Backlash

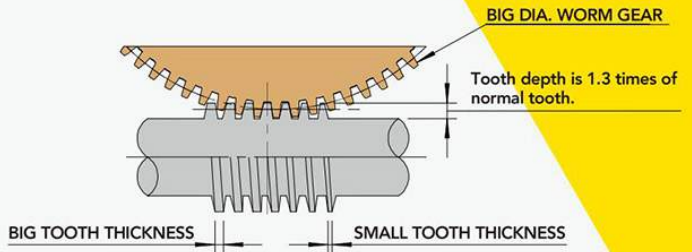
After the worm/worm gear set has been operated for a long time, excessive backlash between both may occur. It may affect the positioning accuracy of the rotary table. When this occurs, simply adjust the worm for reducing backlash, then the rotary table will return to its normal positioning accuracy.



- This combination features less friction coefficient and higher transmission efficiency.
- Matching surface up to 35%~45% resists heavy cutting and is suitable for continuous machining.
- Stable accuracy can be maintained for a long time.



Accuracy Test Report For Japan-imported Worm / Worm Gear



## Bearing Used on Standard Models

**Rigidity is 2~3 times greater than that of conventional bearings**

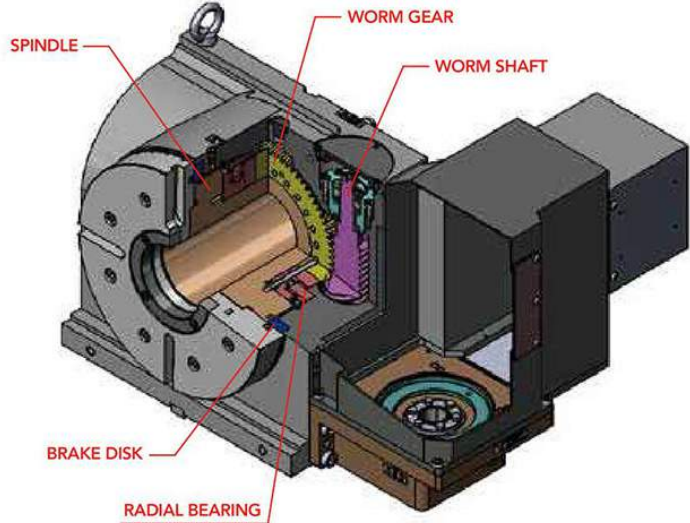


## YRT Extra Large Radial / Axial Bearing

In order to meet the international trend, HSU PEN rotary table is fitted with extra large radial / axial bearing (Germany technology), featuring large diameter of rotating way, heavy load resistance and uniform heat transfer. Another benefits include minimum wear, long service life, high rigidity, high precision and vibration resistance. Lifetime stable accuracy and accurate rotation fully meet the requirement of high positioning accuracy. With outstanding load resisting capability in radial and axial directions, the bearing is able to withstand vibrating impact from any direction and allowing the impact to be perpendicular to one roller surface. As a result, the rotary table can achieve better stability and higher rigidity, while reducing deformation to a minimum.

## Figure of Hydraulic Brake Structure

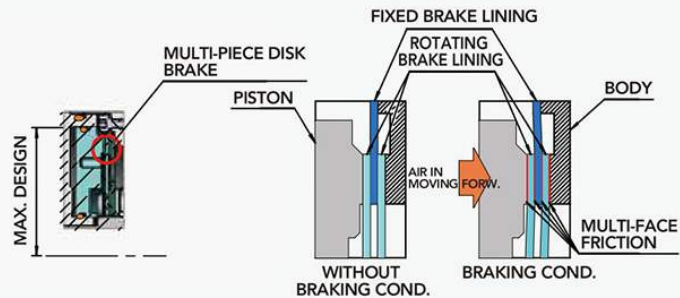
For models over 255 hydraulic brake series, the rotary tables employ large radial / axial bearing and the spindle features large indise hole. In order to ensure concentricity, the braking surface and the bearing connecting surface are ground concentrically. The use of large bearing in combination with the increased wall thickness, which leads to an increase of loading rigidity. The brake disk employs circumference brake, which has been precision ground with high concentricity. No runout will occur when braking. The worm / worm gear are manufactured from wear-resistant material combined with increased teeth size to increase contact surfaces. This results in greater torque, stronger structure and hard to deform for loading with a heavy workpiece.



## Figure of Pneumatic Brake Structure

### Features:

The pneumatically operated products employ multi-piece disk brake and the brake surface of the piston is designed at the biggest diameter position. This means the bigger brake surface diameter, the more powerful braking force. These combined with highly rigid body structure to fully eliminate table surface floating problem during braking. Also, braking torque is 2 times of competitive models.



## Figure of Hydraulic Circumference Structure



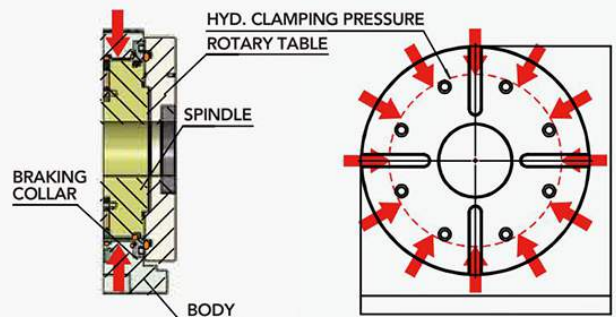
### Full Circumference Brake No Runout. No Displacement

By applying the hydraulic power to clamp the entire circumference, the table runout problem can be avoided.

Unlike the conventional disk brake, the full circumference brake provides greater clamping force and no vibration, ensuring high machining accuracy of the machine.

### Features:

The closer the brake disk actuating point, the more stability and the greater clamping force. The body structure is rigid and stable and holds the spindle from circumference when braking, which makes the table runout free. It provides two more times of braking torque than competitive models. The circumference is enclosed, that prevents chips and cutting fluid from permeating into the body.



# ACCURACY TABLE OF 4-AXIS ROTARY TABLE

ITEM	MODEL	INSP. METH.	UNIT	SUA-125	SUA-170	SUA-210	SUA-250	SUH-255	SUH-320	SUH-400	SUH-500	SUH-630	SUH-800	SUAC-125	SUAC-170	SUAC-210
1. Runout of spindle center hole			mm	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
2. Squares between table surface and base.			mm	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
3. Parallelism between table center line and reference block. R/L error between table center and reference block.			mm	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
4. Runout of rotary table rotation			mm	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015
5. Parallelism between table surface and base			mm	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
6. Straightness of table surface			mm	0.01	0.01	0.01	0.01	0.01	0.01	0.015	0.02	0.02	0.025	0.01	0.01	0.01
7. Indexing accuracy (Measured by linear scale)		Insp. Standard (Japan JIS)	sec.	40	20	20	20	15	15	15	15	15	15	40	20	20
8. Parallelism among center line of rotary table and tailstock and reference block at base.			mm	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
9. Height difference between the rotary table and tailstock center (Tailstock should be higher)			mm	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

## ACCURACY TABLE OF TOOTH TYPE CNC ROTARY TABLE (VERTICAL / HORIZONTAL)

## ACCURACY TABLE OF TOOTH TYPE CNC ROTARY TABLE (VERTICAL TYPE)

ITEM	MODEL	INSP. METH.	UNIT	SUHI-255	SUHI-320	SUHI-400
1. Runout of spindle center hole			mm	0.01	0.01	0.01
2. Squareness between table surface and base.			mm	0.02	0.02	0.02
3. Parallelism between table center line and reference block. R/L error between table center and reference block.			mm	0.02	0.02	0.02
4. Runout of rotary table rotation			mm	0.015	0.015	0.015
5. Parallelism between table surface and base			mm	0.02	0.02	0.02
6. Straightness of table surface			mm	0.01	0.01	0.01
7. Parallelism among center line of rotary table and tailstock and reference block at base			mm	0.02	0.02	0.02
8. Height difference between the rotary table and tailstock center (Tailstock should be higher)			mm	0.02	0.02	0.02
9. Indexing accuracy (Measured by linear scale)		-	sec.	10"	10"	10"

ITEM	MODEL	INSP. METH.	UNIT	SUHC-200V	SUHC-255V	SUHC-320V
1. Runout of spindle center hole			mm	0.01	0.01	0.01
2. Squareness between table surface and base.			mm	0.02	0.02	0.02
3. Parallelism between table center line and reference block. R/L error between table center and reference block.			mm	0.02	0.02	0.02
4. Runout of rotary table rotation			mm	0.015	0.015	0.015
5. Parallelism between table surface and base			mm	0.02	0.02	0.02
6. Straightness of table surface			mm	0.01	0.01	0.01
7. Parallelism among center line of rotary table and tailstock and reference block at base			mm	0.02	0.02	0.02
8. Height difference between the rotary table and tailstock center (Tailstock should be higher)			mm	0.02	0.02	0.02
9. Indexing accuracy (Measured by linear scale)		-	sec.	10"	10"	10"

## ACCURACY TABLE OF 5-AXIS ROTARY TABLE

## ACCURACY TABLE OF TOOTH TYPE CNC ROTARY TABLE (HORIZONTAL TYPE)

ITEM	MODEL	INSP. METH.	UNIT	FBH-125	FBH-170	FBH-210	FBH-255	FBH-320	FBH-400
1. Straightness of table surface			mm	0.01	0.01	0.01	0.01	0.01	0.01
2. Runout of table surface			mm	0.015	0.015	0.015	0.015	0.015	0.015
3. Parallelism between table surface and base			mm	0.02	0.02	0.02	0.02	0.02	0.02
4. Runout of center hole			mm	0.01	0.01	0.01	0.01	0.01	0.01
5. Parallelism of table surface center and tilting axis 0° horizontal and 90° vertical			mm	0.02	0.02	0.02	0.02	0.02	0.02
6. Indexing accuracy (measured by linear scale)	Tilting axis	sec.	60	60	60	50	50	50	
	Swiveling axis	sec.	40	20	20	15	15	15	

ITEM	MODEL	INSP. METH.	UNIT	SUHC-340	SUHC-470	SUHC-600	SUHC-800
1. Straightness of table surface			mm	0.02	0.02	0.02	0.02
2. Flatness of table rotation			mm	0.015	0.015	0.02	0.02
3. Runout of center hole rotation			mm	0.02	0.02	0.02	0.02
4. Parallelism between top and bottom surface of rotary table			mm	0.02	0.02	0.03	0.03
5. Indexing accuracy (measured by linear scale)		-	sec.	10"	10"	10"	10"

09-10

**SUA series**CNC ROTARY TABLE  
Pneumatic Brake

SUA-125  
SUA-170  
SUA-210  
SUA-250

11-12

**SUA L series**CNC ROTARY TABLE  
Pneumatic Brake Left Hand

SUA-170L  
SUA-210L  
SUA-250L

13-14

**SUA B series**CNC ROTARY TABLE  
Pneumatic Brake Back Type

SUA-170B  
SUA-210B  
SUA-250B

15-16

**SUA 2W/3W series**CNC ROTARY TABLE  
2/3 Units with Pneumatic Brake

SUA-125-2W  
SUA-170-2W  
SUA-210-2W  
SUA-250-2W  
SUA-125-3W  
SUA-170-3W  
SUA-210-3W  
SUA-250-3W

17-18

**SUAC series**CNC ROTARY TABLE  
Pneumatic Brake

SUAC-125  
SUAC-170  
SUAC-210

19-22

**SUH series**CNC ROTARY TABLE  
Hydraulic Full Circumference Brake

SUH-255  
SUH-320  
SUH-400  
SUH-500  
SUH-630  
SUH-800

23-24

**SUHI series**CNC ROTARY TABLE  
Tooth Type Hydraulic Positioning  
(CNC Control)

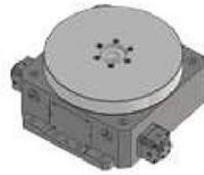
SUHI-255  
SUHI-320  
SUHI-400

25-26

**SUHC series**HYDRAULIC TOOTH TYPE ROTARY TABLE  
Tooth Type Hydraulic Positioning  
(Non-CNC Control)

**Vertical**  
SUHC-200V  
SUHC-255V  
SUHC-320V

27-28

**SUHC series**HYDRAULIC TOOTH TYPE ROTARY TABLE  
Tooth Type Hydraulic Positioning  
(Non-CNC Control)

**Horizontal**  
SUHC-340  
SUHC-470  
SUHC-600  
SUHC-800

29

**FSA series**SINGLE ARM 5-AXIS TILTING  
SWIVELING ROTARY TABLE

FSA-170

30

**CTH series**

4½-AXIS ROTARY TABLE



CTH-255

31-32

**FEH series**5-AXIS TILTING SWIVELING  
ROTARY TABLE

FEH-125  
FEH-170  
FEH-210  
FEH-255  
FEH-320  
FEH-400



**STH series**

33

SWIVELING SPINDLE HEAD



STH-255

**STD series**

34

CNC ROTARY TABLE  
For Tool Grinder

STD-100B5

**FEUH series**

35

CNC SPINDLE HEAD



FEUH-120

**SUAR series**

36

ROTARY TYPE TAILSTOCK  
Pneumatic Brake

SUAR-125  
SUAR-170  
SUAR-210  
SUAR-250

**SUARC series**

37

ROTARY TYPE TAILSTOCK  
Pneumatic Brake

SUARC-125  
SUARC-170  
SUARC-210

**SUHR series**

38

ROTARY TYPE TAILSTOCK  
Hydraulic Brake

SUHR-255  
SUHR-320  
SUHR-400  
SUHR-500  
SUHR-630

**SUTT  
SUTTA series  
SUTTH**

39

CENTER TYPE  
TAILSTOCK**Manual Type**

SUTT-125/170/210/255/320/400

**Pneumatic / Hydraulic Type**

SUTTA(H)-125/170/210/255/320/400

40-45

**OPTIONAL  
ACCESSORIES**

46

HSU PEN ROTARY TABLES USED ON  
VARIOUS RENOWNED MACHINE TOOLS**INDEX**

# SUA

## series CNC ROTARY TABLE

### Pneumatic Brake

- Table diameter provides a choice of Ø125, Ø170, Ø210 and Ø250mm.
- Employs high rigidity, extra large radial and axial bearing.
- Upon request, models with table diameter of Ø170, Ø210 and Ø250mm can be equipped with Japanese made worm/worm gear.
- Equipped with special labyrinth type multi-piece disk brake that provides multi-surface braking. Big area design effectively increases clamping force. The table structure eliminates table surface floating problem.
- Big hole design makes machining more convenient. Manufactured from high quality, durable cast iron. Increased body thickness increases load resistance capability. Large through-hole diameter. High strength, heavy cutting resistance as well as high precision.
- Upon request, models with table diameter of Ø170, Ø210 and Ø250mm are available with hydraulic brake.
- Various sheet metal guards are available to suit various brands of motors. Contact us for detail.

SUA-125  
SUA-210

SUA-170  
SUA-250

#### Model Identification of Rotary Table

SUA-170

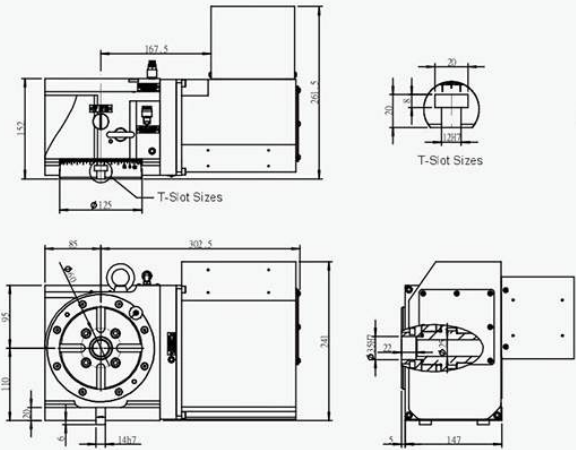
Model      Pneumatic (A)  
Hydraulic (H)      Table Diameter



MODEL	UNIT	SUA-125	SUA(H)-170	SUA(H)-210	SUA(H)-250		
Table diameter		mm	Ø125	Ø170	Ø210	Ø250	
Center hole diameter		mm	Ø35H7	Ø40H7	Ø40H7	Ø40H7	
Through-hole diameter		mm	Ø25	Ø40	Ø40	Ø40	
Height of center (Vertical)		mm	110	135	160	160	
Height of table (Horizontal)		mm	152	153	153	153	
T-slot width of table		mm	12H7	12H7	12H7	12H7	
Width of guide block		mm	14h7	18h7(14h7)	18h7(14h7)	18h7(14h7)	
Min. increment		deg.	0.001	0.001	0.001	0.001	
Indexing accuracy		sec.	40	20	20	20	
Repeatability		sec.	4	4	4	4	
Clamping torque		Air 5~7kg/cm <sup>2</sup>	N.m	100	200	200	300
		Hyd. 20~30kg/cm <sup>2</sup>	N.m	150	400	400	500
Servo motor model		FANUC	-	α2i / β4is	α4i / β8is	α4i / β8is	α4i / β8is
		Mitsubishi	-	HF-75T	HF-104T	HF-104T	HF-154T
Teeth ratio		-	1 : 60	1 : 90	1 : 90	1 : 90	
Max. table speed (FANUC α motor)		rpm	83.3	44.4	44.4	44.4	
Allowable load capacity	Vertical	kg	50	85	85	100	
	Horizontal	kg	110	160	160	180	
	With tailstock	kg	110	160	160	180	
Allowable cutting force (Clamped status)	F	N	10000	14500	14500	16000	
	FxL	N.m	410	1020	1020	1120	
	FxL	N.m	80	180	400	700	
Allowable torque of worm gear		N.m	85	170	260	260	
Allowable inertia	$J = \frac{W \cdot D^2}{8}$	kg.m <sup>2</sup>	0.14	0.52	0.62	0.62	
Weight (Motor excluded)		kg	36	50	57	59	

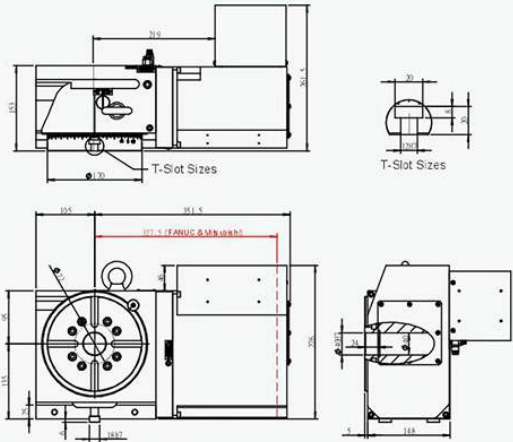
■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.

## Dimensional Drawings: SUA-125



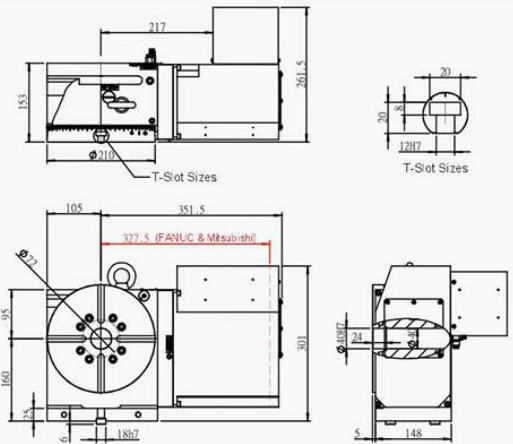
Unit: mm

## SUA-170



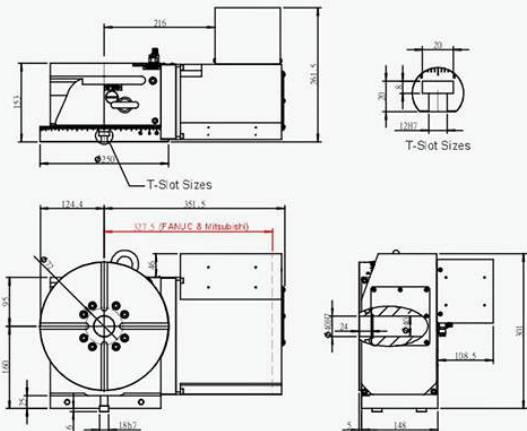
Unit: mm

## SUA-210



Unit: mm

## SUA-250



Unit: mm

\* PAINTING COLOR: Choice of shining silver or yellow color.

# SUA L series

## CNC ROTARY TABLE Pneumatic Brake Left Hand

SUA-170L SUA-210L  
SUA-250L

- Table diameter provides a choice of Ø170, Ø210 and Ø250mm.
- Employs high rigidity, extra large radial and axial bearing.
- Upon request, models with table diameter of Ø170, Ø210 and Ø250mm can be equipped with Japanese made worm/worm gear.
- Equipped with special labyrinth type multi-piece disk brake that provides multi-surface braking. Big area design effectively increases clamping force. The table structure eliminates table surface floating problem.
- Big hole design makes machining more convenient. Manufactured from high quality, durable cast iron. Increased body thickness increases load resistance capability. Large through-hole diameter. High strength, heavy cutting resistance as well as high precision.
- Upon request, models with table diameter of Ø170, Ø210 and Ø250mm are available with hydraulic brake.
- Various sheet metal guards are available to suit various brands of motors. Contact us for detail.

### Model Identification of Rotary Table

**SUA-170L**

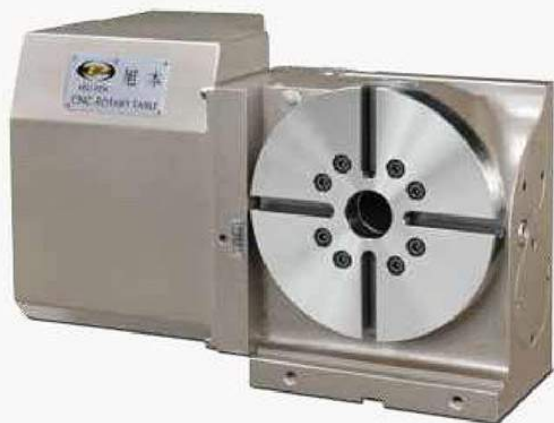
Model      Pneumatic (A)  
Hydraulic (H)      Left Hand  
Table Diameter



MODEL	UNIT	SUA(H)-170L	SUA(H)-210L	SUA(H)-250L	
Table diameter		mm	Ø170	Ø210	Ø250
Center hole diameter		mm	Ø40H7	Ø40H7	Ø40H7
Through-hole diameter		mm	Ø40	Ø40	Ø40
Height of center (Vertical)		mm	135	160	160
Height of table (Horizontal)		mm	153	153	153
T-slot width of table		mm	12H7	12H7	12H7
Width of guide block		mm	18h7(14h7)	18h7(14h7)	18h7(14h7)
Min. increment		deg.	0.001	0.001	0.001
Indexing accuracy		sec.	20	20	20
Repeatability		sec.	4	4	4
Clamping torque	Air 5~7kg/cm <sup>2</sup>	N.m	200	200	300
	Hyd. 20~30kg/cm <sup>2</sup>	N.m	400	400	500
Servo motor model	FANUC	-	α4i / β8is	α4i / β8is	α4i / β8is
	Mitsubishi	-	HF-104T	HF-104T	HF-154T
Teeth ratio		-	1 : 90	1 : 90	1 : 90
Max. table speed (FANUC α motor)		rpm	44.4	44.4	44.4
Allowable load capacity	Vertical	kg	85	85	100
	Horizontal	kg	160	160	180
	With tailstock	kg	160	160	180
Allowable cutting force (Clamped status)	F	N	14500	14500	16000
	FxL	N.m	1020	1020	1120
	FxL	N.m	180	400	700
Allowable torque of worm gear		N.m	170	260	260
Allowable inertia	$J = \frac{W \cdot D^2}{8}$	kg.m <sup>2</sup>	0.52	0.62	0.62
Weight (Motor excluded)		kg	50	57	59

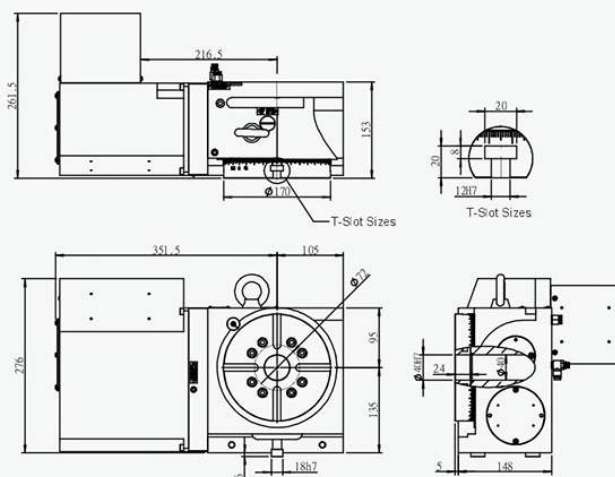
■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.

## Dimensional Drawings:



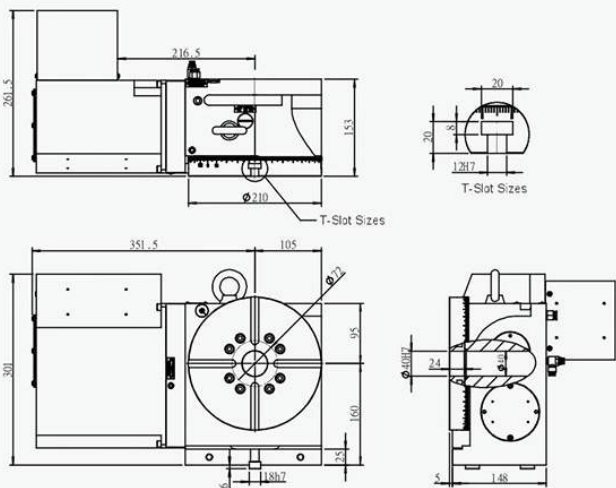
### SUA-170L

Unit: mm



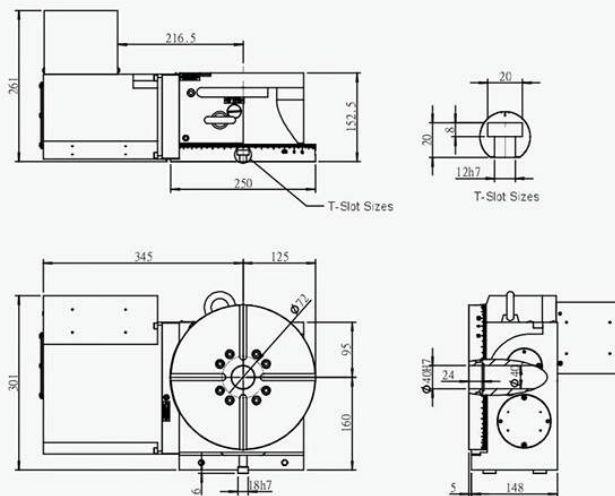
### SUA-210L

Unit: mm



### SUA-250L

Unit: mm



\* PAINTING COLOR: Choice of shining silver or yellow color.

# SUA B series

## CNC ROTARY TABLE Pneumatic Brake Back Type

SUA-170B SUA-210B  
SUA-250B




















- Table diameter provides a choice of Ø170, Ø210 and Ø250mm.
- Employs high rigidity, extra large radial and axial bearing.
- Upon request, models with table diameter of Ø170, Ø210 and Ø250mm can be equipped with Japanese made worm/worm gear.
- Equipped with special labyrinth type multi-piece disk brake that provides multi-surface braking. Big area design effectively increases clamping force. The table structure eliminates table surface floating problem.
- Big hole design makes machining more convenient. Manufactured from high quality, durable cast iron. Increased body thickness increases load resistance capability. Large through-hole diameter. High strength, heavy cutting resistance as well as high precision.
- Upon request, models with table diameter of Ø170, Ø210 and Ø250mm are available with hydraulic brake.
- Various sheet metal guards are available to suit various brands of motors. Contact us for detail.

### Model Identification of Rotary Table

**SUA-170B**

Model      Pneumatic (A)  
                 Hydraulic (H)      Back Type  
Table Diameter



MODEL	UNIT	SUA(H)-170B	SUA(H)-210B	SUA(H)-250B	
Table diameter 	mm	Ø170	Ø210	Ø250	
Center hole diameter 	mm	Ø40H7	Ø40H7	Ø40H7	
Through-hole diameter 	mm	Ø40	Ø40	Ø40	
Height of center (Vertical) 	mm	135	160	160	
T-slot width of table 	mm	12H7	12H7	12H7	
Width of guide block 	mm	18h7(14h7)	18h7(14h7)	18h7(14h7)	
Min. increment 	deg.	0.001	0.001	0.001	
Indexing accuracy 	sec.	20	20	20	
Repeatability	sec.	4	4	4	
Clamping torque 	Air 5~7kg/cm <sup>2</sup>	N.m	200	200	300
	Hyd. 20~30kg/cm <sup>2</sup>	N.m	400	400	500
Servo motor model	FANUC	-	α4i / β8is	α4i / β8is	α4i / β8is
	Mitsubishi	-	HF-104S	HF-104S	HF-154S
Teeth ratio 	-	1 : 90	1 : 90	1 : 90	
Max. table speed (FANUC α motor) 	rpm	44.4	44.4	44.4	
Allowable load capacity	Vertical 	kg	85	85	100
	Horizontal 	kg	160	160	180
	With tailstock 	kg	160	160	180
Allowable cutting force (Clamped status)	F 	N	14500	14500	16000
	FxL 	N.m	1020	1020	1120
	FxL 	N.m	180	400	700
Allowable torque of worm gear 	N.m	170	260	260	
Allowable inertia $J = \frac{W \cdot D^2}{8}$ 	kg.m <sup>2</sup>	0.52	0.62	0.62	
Weight (Motor excluded)	kg	60	67	70	

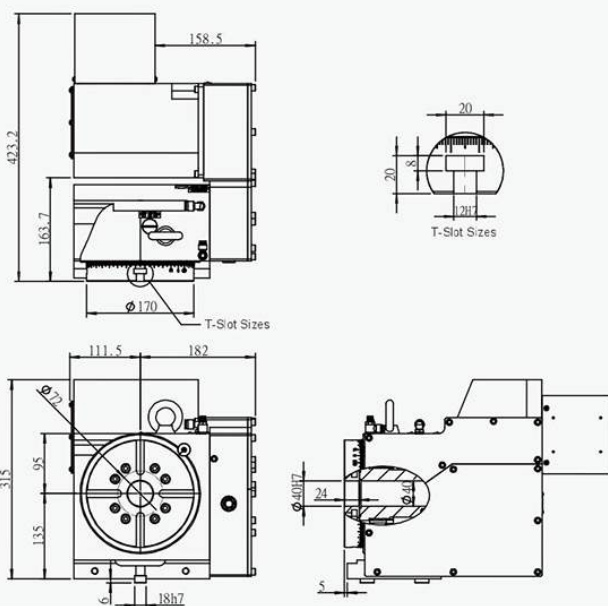
■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.

## Dimensional Drawings:



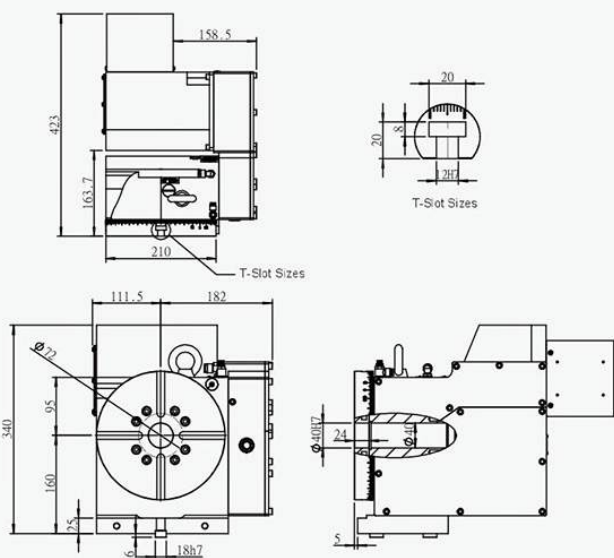
### SUA-170B

Unit: mm



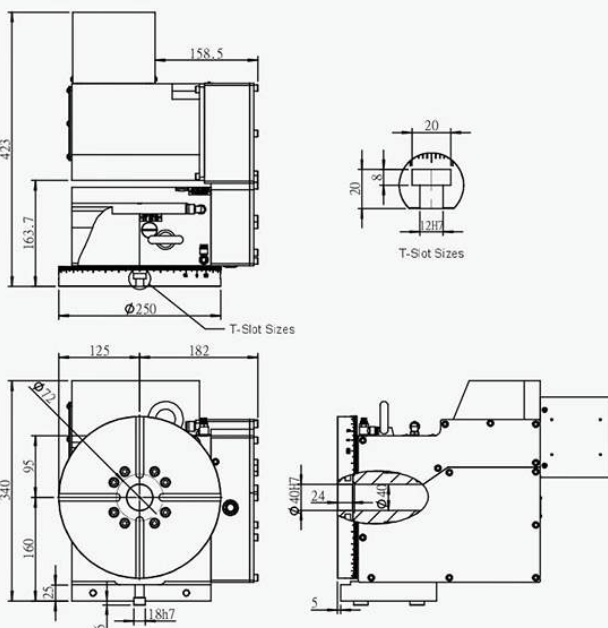
### SUA-210B

Unit: mm



### SUA-250B

Unit: mm



\* PAINTING COLOR: Choice of shining silver or yellow color.

# SUA 2W/3W series

## CNC ROTARY TABLE 2/3 Units with Pneumatic Brake

- Table diameter provides a choice of Ø125, Ø170, Ø210 and Ø250mm.
- Employs high rigidity, extra large radial and axial bearing.
- Upon request, models with table diameter of Ø170, Ø210 and Ø250mm can be equipped with Japanese made worm/worm gear.
- Equipped with special labyrinth type multi-piece disk brake that provides multi-surface braking. Big area design effectively increases clamping force. The table structure eliminates table surface floating problem.
- Big hole design makes machining more convenient. Manufactured from high quality, durable cast iron. Increased body thickness increases load resistance capability. Large through-hole diameter. High strength, heavy cutting resistance as well as high precision.
- Upon request, models with table diameter of Ø170, Ø210 and Ø250mm are available with hydraulic brake.
- Various sheet metal guards are available to suit various brands of motors. Contact us for detail.

SUA-125-2W SUA-170-2W  
SUA-210-2W SUA-250-2W  
SUA-125-3W SUA-170-3W  
SUA-210-3W SUA-250-3W

### Model Identification of Rotary Table

SUA-170-2W

Model

Pneumatic (A)  
Hydraulic (H)

Table Diameter

2 Units  
3W: 3Units



MODEL		UNIT	SUA(H)-125-2W SUA(H)-125-3W	SUA(H)-170-2W SUA(H)-170-3W	SUA(H)-210-2W SUA(H)-210-3W	SUA(H)-250-2W SUA(H)-250-3W
Table diameter		mm	Ø125	Ø170	Ø210	Ø250
Center hole diameter		mm	Ø35H7	Ø40H7	Ø40H7	Ø40H7
Through-hole diameter		mm	Ø25	Ø40	Ø40	Ø40
Height of center (Vertical)		mm	155	180	205	205
Height of table (Horizontal)		mm	152	153	153	153
T-slot width of table		mm	12H7	12H7	12H7	12H7
Width of guide block		mm	Ø18h7	Ø18h7	Ø18h7	Ø18h7
Min. increment		deg.	0.001	0.001	0.001	0.001
Indexing accuracy		sec.	40	20	20	20
Repeatability		sec.	4	4	4	4
Clamping torque	Air 5~7kg/cm <sup>2</sup>	N.m	100	200	200	300
	Hyd. 20~30kg/cm <sup>2</sup>	N.m	150	400	400	500
Servo motor model	FANUC	-	α2i / β4is	α4i / β8is	α4i / β8is	α4i / β8is
	Mitsubishi	-	HF-75T	HF-104T	HF-104T	HF-154T
Teeth ratio		-	1 : 60	1 : 90	1 : 90	1 : 90
Max. table speed (FANUC α motor)		rpm	83.3	44.4	44.4	44.4
Allowable load capacity	Vertical	kg	50	85	85	100
	Horizontal	kg	110	160	160	180
	With tailstock	kg	110	160	160	180
Allowable cutting force (Clamped status)	F	N	10000	14500	14500	16000
	FxL	N.m	410	1020	1020	1120
	FxL	N.m	80	180	400	700
Allowable torque of worm gear		N.m	85	170	260	260
Allowable inertia	$J = \frac{W \cdot D^2}{8}$	kg.m <sup>2</sup>	0.14	0.52	0.62	0.62

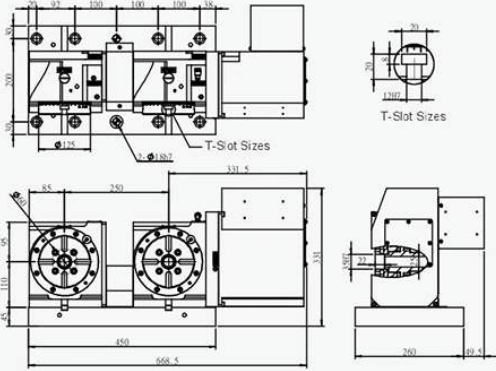
■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.



# Dimensional Drawings:

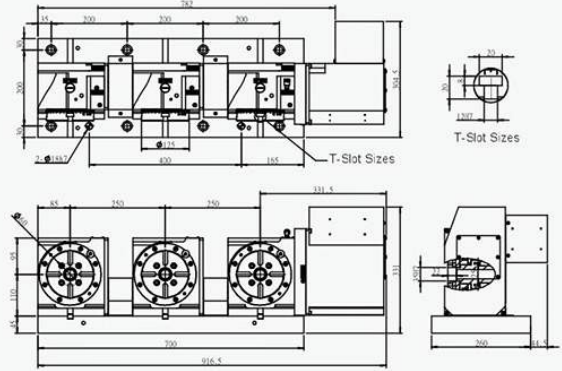
## SUA-125-2W

Unit: mm



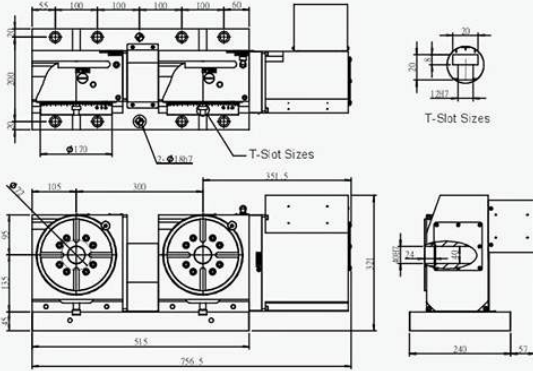
## SUA-125-3W

Unit: mm



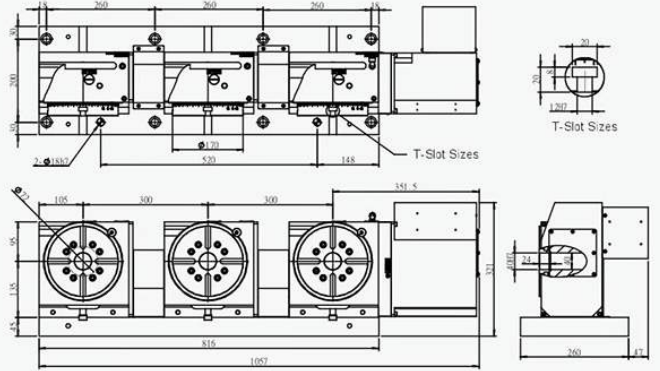
## SUA-170-2W

Unit: mm



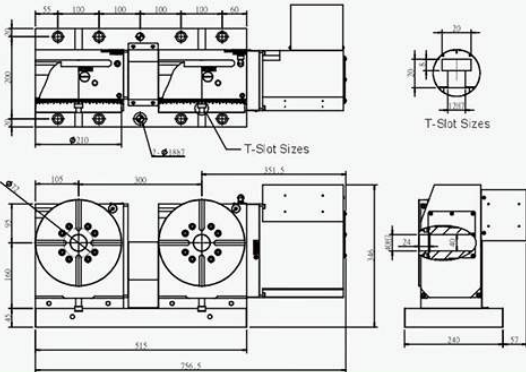
## SUA-170-3W

Unit: mm



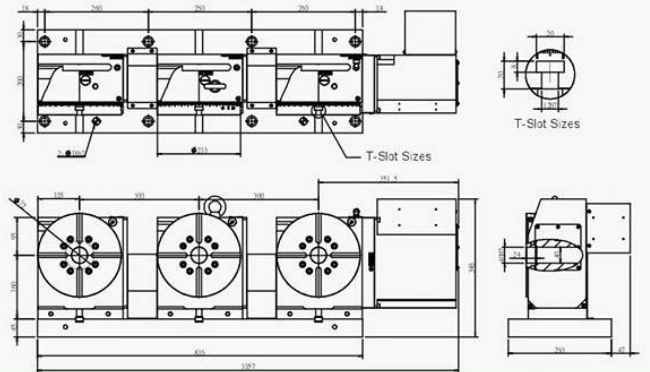
## SUA-210-2W

Unit: mm



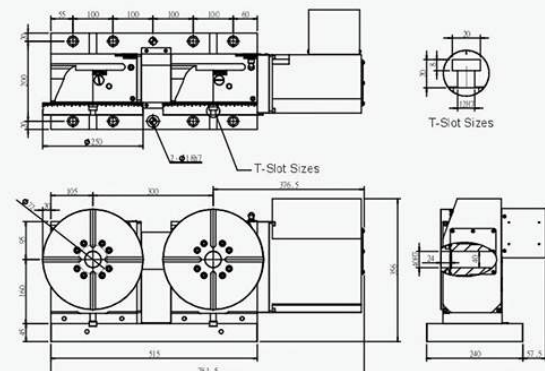
## SUA-210-3W

Unit: mm



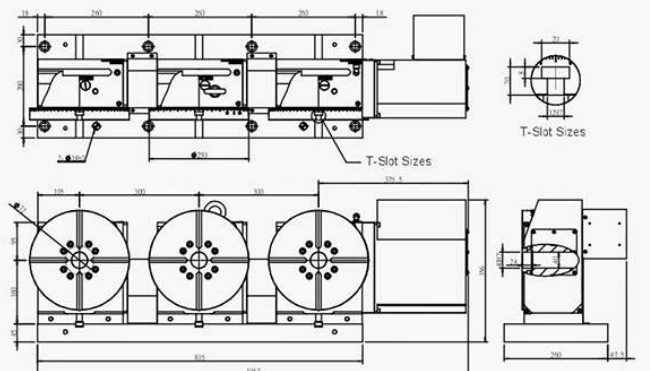
## SUA-250-2W

Unit: mm



## SUA-250-3W

Unit: mm



\* PAINTING COLOR: Choice of shining silver or yellow color.

# SUAC

## series

### CNC ROTARY TABLE Pneumatic Brake

- Table diameter provides a choice of Ø125, Ø170 and Ø210mm.
- Employs high rigidity, extra large radial and axial bearing.
- Upon request, models with table diameter of Ø170 and Ø210mm can be equipped with Japanese made worm/worm gear.
- Equipped with special labyrinth type multi-piece disk brake that provides multi-surface braking. Big area design effectively increases clamping force. The table structure eliminates table surface floating problem.
- Big hole design makes machining more convenient. Manufactured from high quality, durable cast iron. Increased body thickness increases load resistance capability. Large through-hole diameter. High strength, heavy cutting resistance as well as high precision.
- Upon request, models with table diameter of Ø170 and Ø210mm are available with hydraulic brake.
- Various sheet metal guards are available to suit various brands of motors. Contact us for detail.

SUAC-125 SUAC-170  
SUAC-210

#### Model Identification of Rotary Table

**SUAC-170**

Model      Pneumatic (A)  
                 Hydraulic (H)      C series      Table Diameter

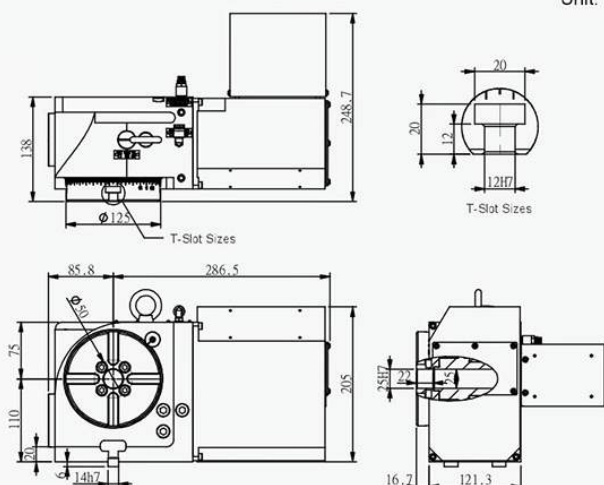


MODEL	UNIT	SUAC-125	SUAC(H)-170	SUAC(H)-210	
Table diameter		mm	Ø125	Ø170	Ø210
Center hole diameter		mm	Ø25H7	Ø40H7	Ø40H7
Through-hole diameter		mm	Ø25	Ø40	Ø40
Height of center (Vertical)		mm	110	160	210
Height of table (Horizontal)		mm	138	-	-
T-slot width of table		mm	12H7	12H7	12H7
Width of guide block		mm	14h7	14h7	14h7
Min. increment		deg.	0.001	0.001	0.001
Indexing accuracy		sec.	40	20	20
Repeatability		sec.	4	4	4
Clamping torque	Air 5~7kg/cm <sup>2</sup>	N.m	80	200	200
	Hyd. 20~30kg/cm <sup>2</sup>	N.m	-	400	400
Servo motor model	FANUC	-	α2i / B4is	α4i / B8is	α4i / B8is
	Mitsubishi	-	HF-75 / HF-105S	HF-54S / 104S	HF-54S / 104S
Teeth ratio		-	1 : 48	1 : 90	1 : 72
Max. table speed (FANUC α motor)		rpm	83.3	44.4	44.4
Allowable load capacity	Vertical	kg	40	85	85
	Horizontal	kg	90	160	-
	With tailstock	kg	100	160	160
Allowable cutting force (Clamped status)	F	N	9000	11500	12500
	FxL	N.m	400	1000	1000
	FxL	N.m	80	300	300
Allowable torque of worm gear		N.m	85	260	260
Allowable inertia	$J = \frac{W \cdot D^2}{8}$	kg.m <sup>2</sup>	0.14	0.58	0.62
Weight (Motor excluded)		kg	27	50	70

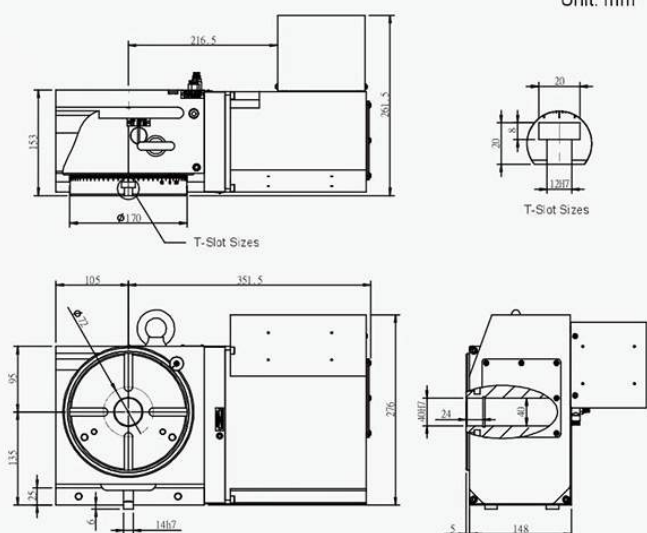
■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.

## Dimensional Drawings:

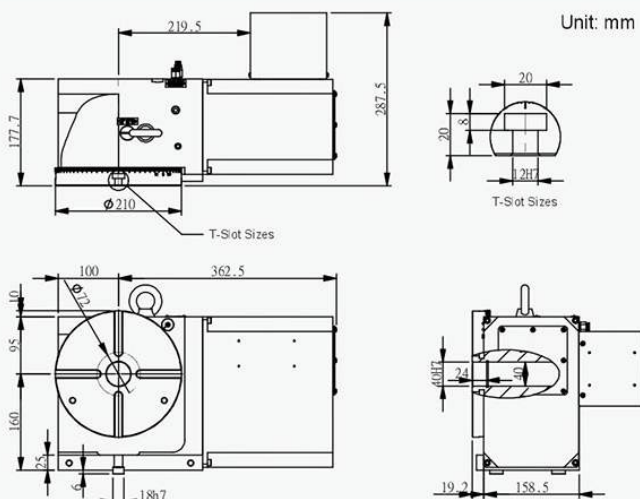
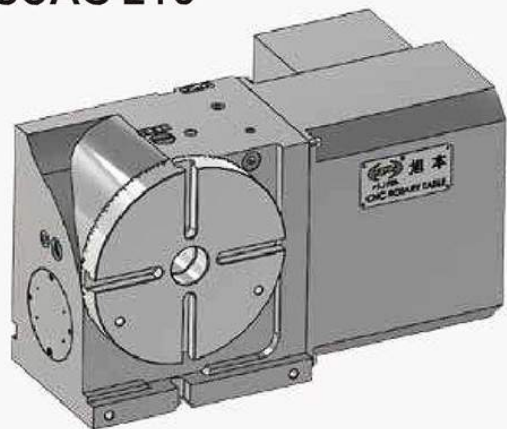
### SUAC-125



### SUAC-170



### SUAC-210



\* PAINTING COLOR: Choice of shining silver or yellow color.

# SUH series

## CNC ROTARY TABLE

### Hydraulic Full Circumference Brake

- Table diameter provides a choice of Ø255, Ø320, Ø400, Ø500, Ø630 and Ø800mm.
- Employs high rigidity, extra large radial and axial bearing.
- Upon request, models with table diameter of Ø255, Ø320 and Ø400mm can be equipped with Japanese made worm/worm gear.
- Designed with the new full circumference brake that features even braking force without run-out. High torque, easy lubrication as well as compact, rigid and enclosed structure ensure high cutting quality.
- Big hole design makes machining more convenient. Manufactured from high quality, durable cast iron. Increased body thickness increases load resistance capability. Large through-hole diameter. High strength, heavy cutting resistance as well as high precision.
- Various sheet metal guards are available to suit various brands of motors. Contact us for detail.





















SUH-255    SUH-320  
 SUH-400    SUH-500  
 SUH-630    SUH-800

#### Model Identification of Rotary Table

**SUH-255N**

Model    Hydraulic Full Circumference Brake    Table Diameter



MODEL	UNIT	SUH-255	SUH-320	SUH-400	SUH-500	SUH-630	SUH-800
Table diameter	 mm	Ø255	Ø320	Ø400	Ø500	Ø630	Ø800
Center hole diameter	 mm	Ø80H7	Ø120H7	Ø120H7	Ø220H7	Ø280H7	Ø280H7
Through-hole diameter	 mm	Large hole Ø80	Large hole Ø120	Large hole Ø120	Large hole Ø220	Large hole Ø280	Large hole Ø280
Height of center (Vertical)	 mm	160	210	255	310	400	480
Height of table (Horizontal)	 mm	200	235	250	290	325	345
T-slot width of table	 mm	12H7	14H7	14H7	18H7	18H7	18H7
Width of guide block	 mm	18h7	18h7	18h7	18h7	18h7	22h7
Min. increment	 deg.	0.001	0.001	0.001	0.001	0.001	0.001
Indexing accuracy		sec.	15	15	15	15	15
Repeatability		sec.	4	4	4	4	4
Clamping method	Hyd. pressure	kg/cm <sup>2</sup>	35	35	35	35	35
Clamping torque		N.m	600	1150	2000	3700	6000
Servo motor model	FANUC	-	α4i / β8is	α12i / β22is	α12i / β22is	α12i / β22is	α22i
	Mitsubishi	-	HF-154S	HF-204S	HF-204S/HF-303S	HF-204S/HF-303S	HF-354S
Teeth ratio		-	1 : 120	1 : 120	1 : 120	1 : 180	1 : 180
Max. table speed (FANUC α motor)		rpm	33.3	25	25	16.6	16.6
Allowable load capacity	Vertical 	kg	110	170	220	250	980
	Horizontal 	kg	260	370	520	600	2000
	With tailstock 	kg	260	370	520	600	2000
Allowable cutting force (Clamped status)	F 	N	20000	30000	40000	40000	49000
	FxL 	N.m	1120	1800	4000	5000	8500
	FxL 	N.m	700	1180	2500	3200	4500
Allowable torque of worm gear		N.m	550	780	1700	2500	4300
Allowable inertia $J = \frac{W \cdot D^2}{8}$		kg.m <sup>2</sup>	2.07	4.5	10	19	45.5
Weight (Motor excluded)		kg	108	195	314	406	686

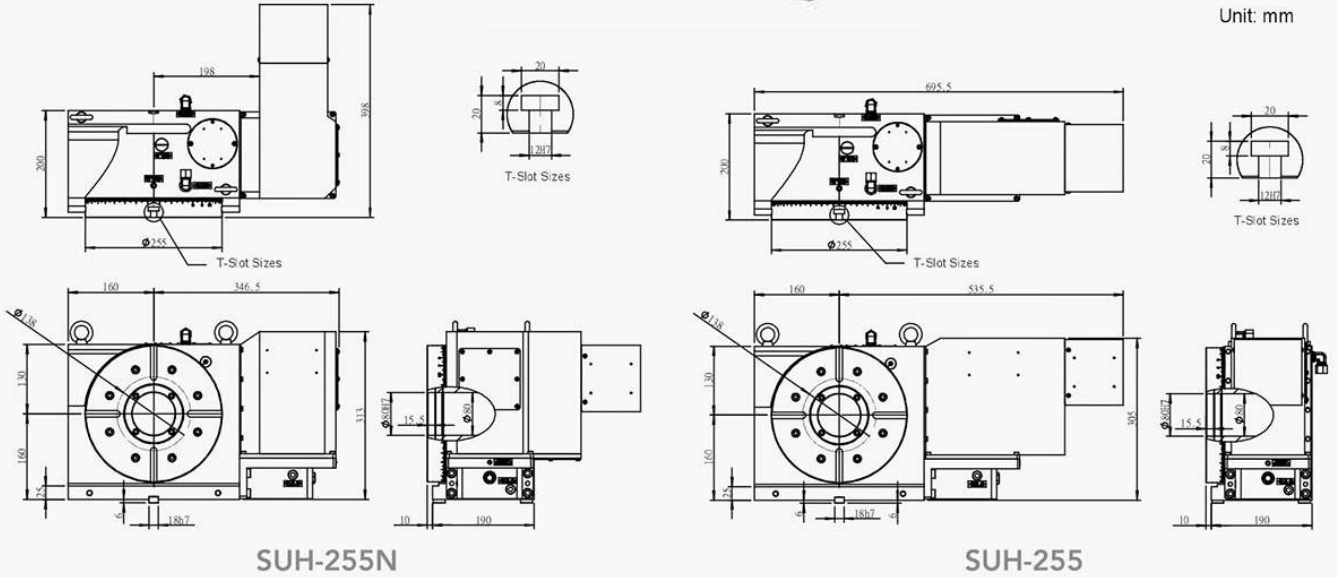
■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.

# Dimensional Drawings:

## SUH-255



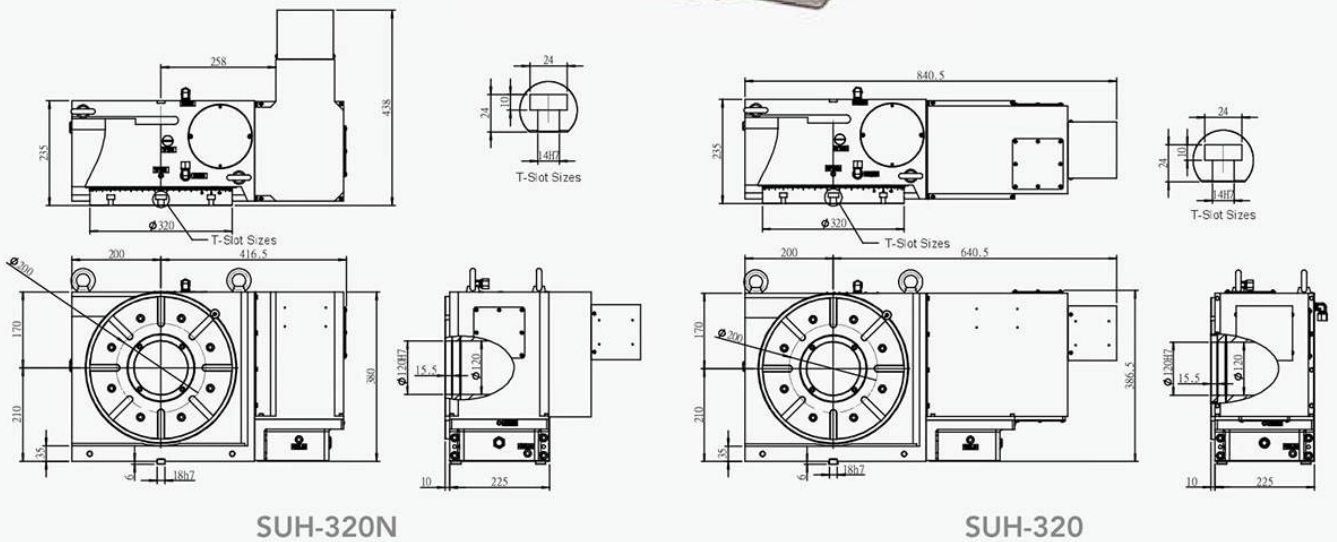
Unit: mm



## SUH-320



Unit: mm



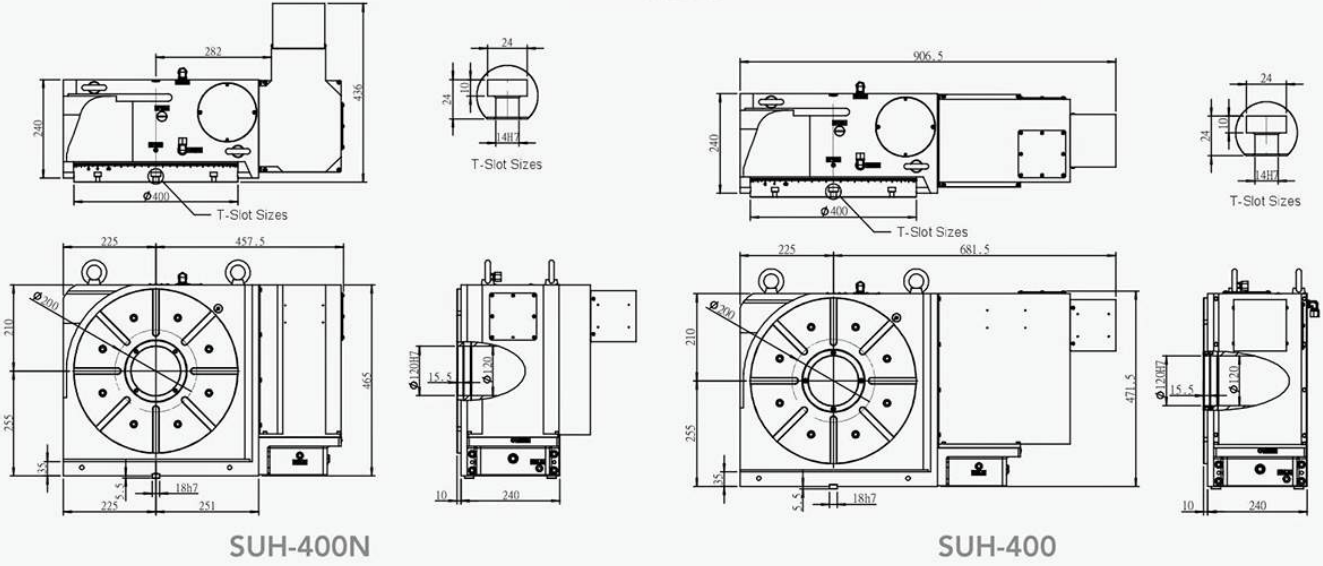
\* PAINTING COLOR: Choice of shining silver or yellow color.

Dimensional Drawings:

SUH-400

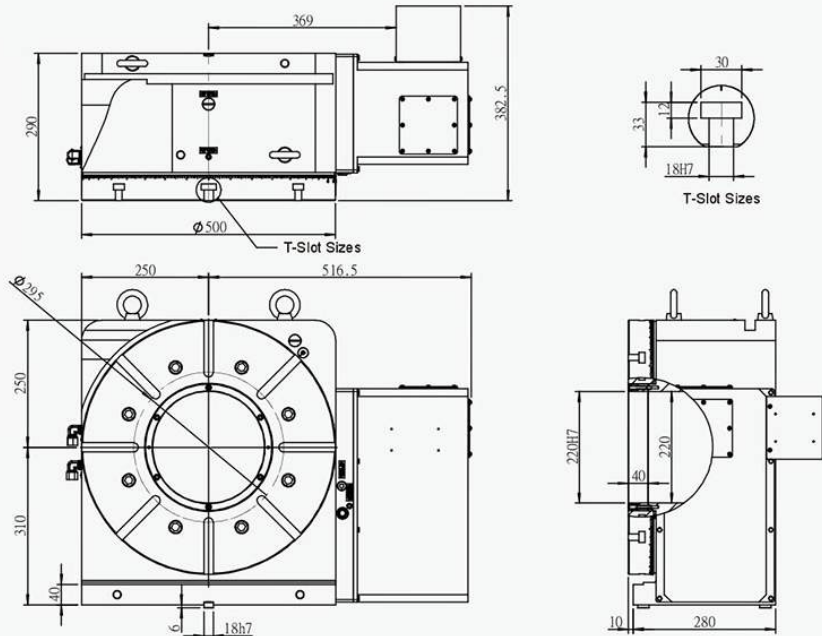


Unit: mm



SUH-500

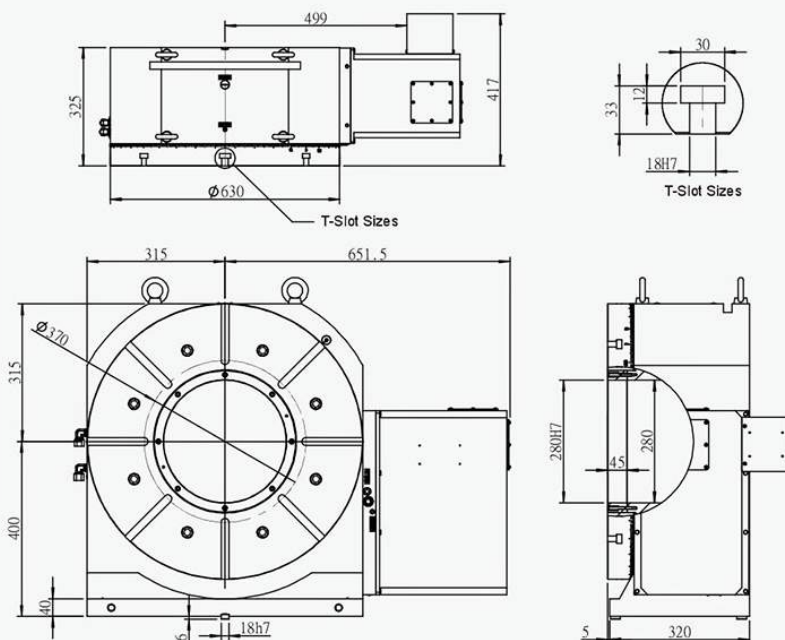
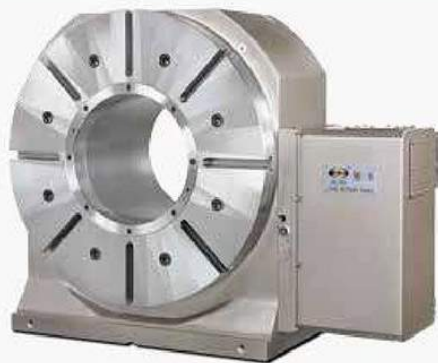
Unit: mm



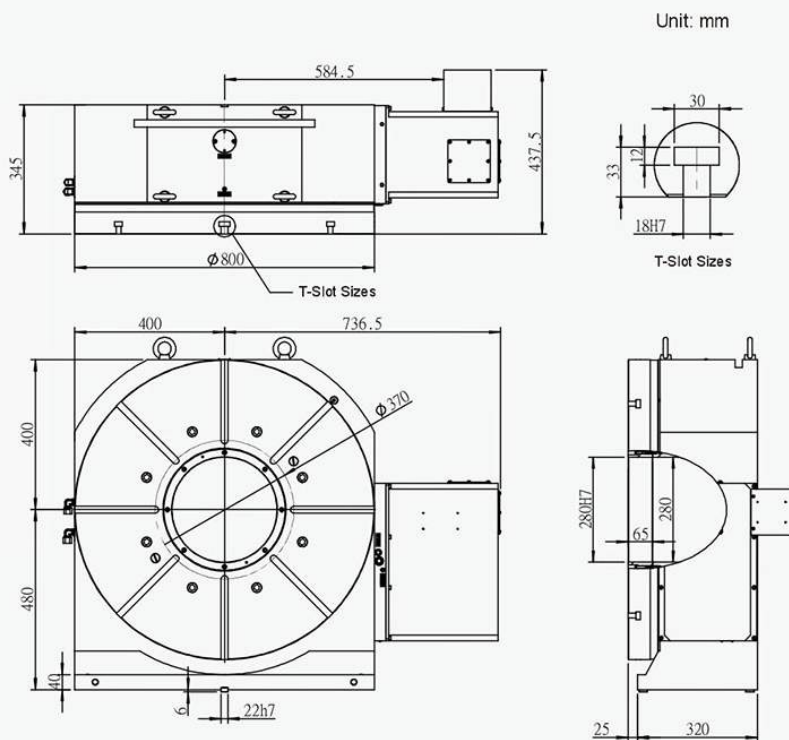
\* PAINTING COLOR: Choice of shining silver or yellow color.

## Dimensional Drawings:

### SUH-630



### SUH-800



\* PAINTING COLOR: Choice of shining silver or yellow color.

# SUHI series

## CNC ROTARY TABLE Tooth Type Hydraulic Positioning (CNC Control)

- Table diameter provides a choice of Ø255, Ø320 and Ø400mm.
- Choice of indexing accuracy of 1° or 5°.
- Employs three-piece clutch gear with accuracy reaching ±5 sec.
- Upon request, Japanese made worm/worm gear are available.
- Big hole design makes machining more convenient. Manufactured from high quality, durable cast iron. Increased body thickness increases load resistance capability. Large through-hole diameter. High strength, heavy cutting resistance as well as high precision.
- Various sheet metal guards are available to suit various brands of motors. Contact us for detail.

Employs three-piece clutch gear  
Accuracy ±5sec.

SUHI-255 SUHI-320  
SUHI-400

### Model Identification of Rotary Table

**SUHI-255N**

Model | Tooth Type Hyd. Positioning | Reduced Sheet Metal Table Diameter



MODEL	UNIT	SUHI-255	SUHI-320	SUHI-400	
Table diameter		mm	Ø255	Ø320	Ø400
Center hole diameter		mm	Ø50H7	Ø80H7	Ø80H7
Through-hole diameter		mm	Ø50	Ø80	Ø80
Height of center (Vertical)		mm	160	210	255
Height of table (Horizontal)		mm	205	250	255
T-slot width of table		mm	12H7	14H7	14H7
Width of guide block		mm	18h7	14h7	14h7
Min. increment		deg.	1° or 5°	1° or 5°	1° or 5°
Indexing accuracy		sec.	±5	±5	±5
Repeatability		sec.	±1	±1	±1
Clamping method	Hyd. pressure	kg/cm <sup>2</sup>	35	35	35
Clamping torque		N.m	1750	2500	3000
Servo motor model	FANUC	-	α4i / β8is	α12i / β22is	α12i / β22is
	Mitsubishi	-	HF-154S	HF-204S	HF-204S
Teeth ratio		-	1 : 120	1 : 120	1 : 120
Max. table speed (FANUC α motor)		rpm	33.3	25	25
Allowable load capacity	Vertical	kg	125	175	250
	Horizontal	kg	300	350	500
	With tailstock	kg	300	400	500
Allowable cutting force (Clamped status)	F	N	16000	20000	30000
	FxL	N.m	1750	2500	3000
	FxL	N.m	3000	4000	5000
Allowable torque of worm gear		N.m	250	750	880
Allowable inertia	$J = \frac{W \cdot D^2}{8}$	kg.m <sup>2</sup>	3	4.8	11
Weight (Motor excluded)		kg	125	205	325

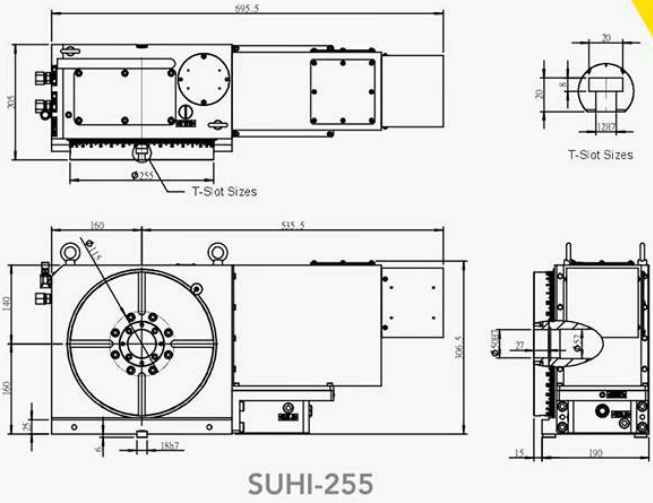
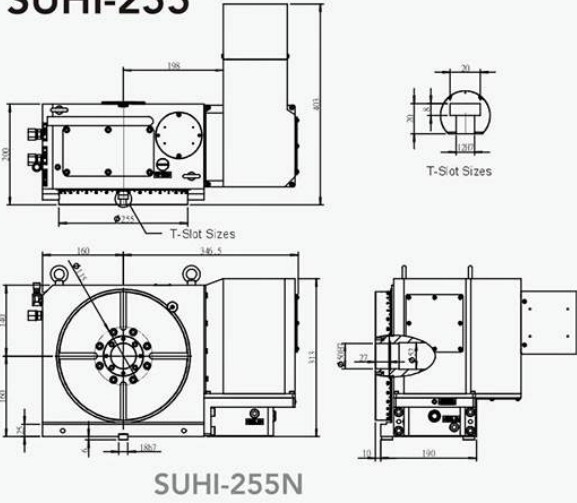
■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.



# Dimensional Drawings:

Unit: mm

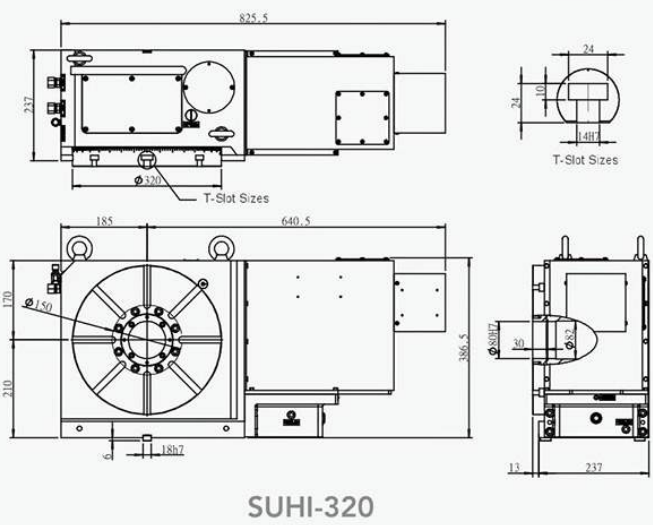
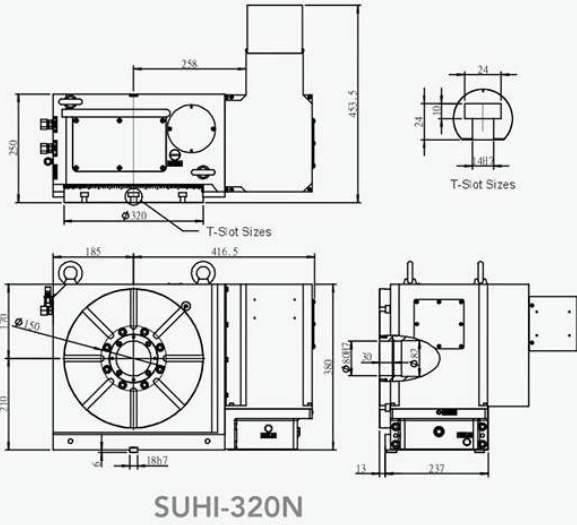
## SUHI-255



SUHI-255N

SUHI-255

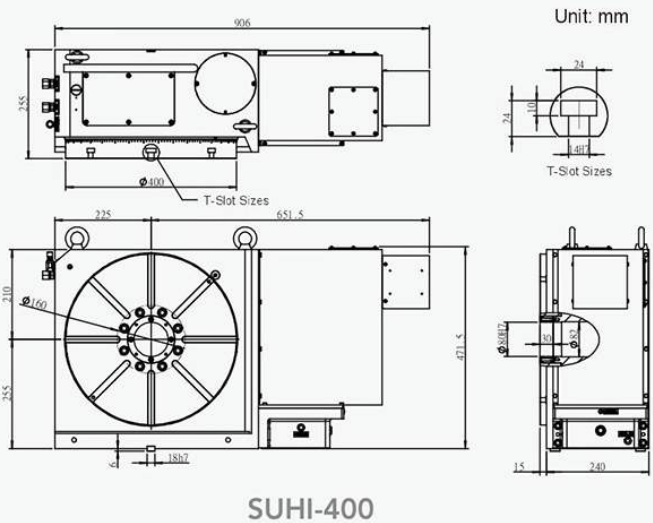
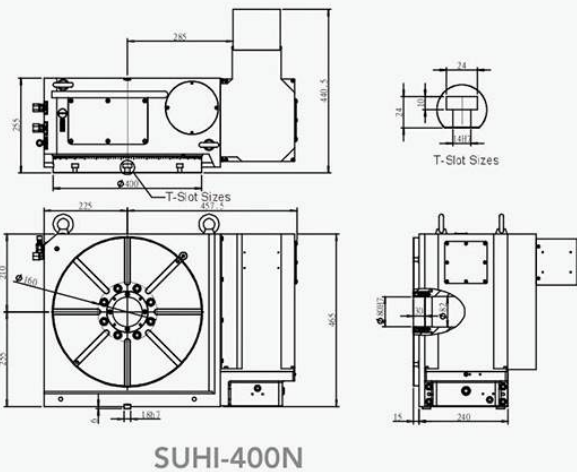
## SUHI-320



SUHI-320N

SUHI-320

## SUHI-400



SUHI-400N

SUHI-400

\* PAINTING COLOR: Choice of shining silver or yellow color.

Vertical

SUHC-200V SUHC-255V  
SUHC-320V

# SUHC series

## HYDRAULIC TOOTH TYPE ROTARY TABLE

### Tooth Type Hydraulic Positioning (Non-CNC Control)

- Table diameter provides a choice of Ø200, Ø255 and Ø320mm, etc.
- Employs three-piece clutch gear with accuracy reaching  $\pm 5$  sec. Suitable for heavy cutting.
- Choice of 4, 6, 8, 12 and 24 indexes.
- Choice of special indexes 2, 3, 5, 9...

#### Model Identification of Rotary Table

**SUHC-255V**

Model      Tooth Type Hyd. Positioning      Table Diameter      Vertical



Employs three-piece clutch gear  
Accuracy  $\pm 5$  sec.

MODEL	UNIT	SUHC-200V	SUHC-255V	SUHC-320V	
Table diameter		mm	Ø200	Ø255	Ø320
Center hole diameter		mm	Ø30H7	Ø30H7	Ø65H7
Center hole depth		mm	35	35	15
Through hole diameter		mm	Ø27	Ø27	Ø31
Height of center (Vertical)		mm	160	160	230
Height of table (Horizontal)		mm	180	180	210
T-slot width of table		mm	12H7	12H7	14H7
Width of guide block		mm	18h7	18h7	18h7
Indexing number (Standard)	-	4 / 6 / 8 / 12 / 24 (Standard indexes)			
Indexing number (Spec.)	-	2 / 3 / 5 / 9 (Special indexes)			
Indexing accuracy		sec.	±5	±5	±5
Repeatability		sec.	±2	±2	±2
Clamping method	Hyd. pressure	kg/cm <sup>2</sup>	35	35	35
Unclamp / clamp time		s	0.7/0.1	0.7/0.1	0.6/0.1
Time of rotating 90°		s	1.5	2	2.5
Clamping torque		kg-m	25	37	60
		N	245	363	588
Allowable instant inertia $J = \frac{W \cdot D^2}{8}$		kg-m <sup>2</sup>	7	10	21.25
Allowable load	Vertical	kg	95	130	200
	Horizontal	kg	120	150	300
Allowable cutting force (Clamped status)	F	kgf	1260	1410	1560
		N	12348	13818	15288
	FxL	kgf.m	55	122	145
		N.m	539	1197	1421
	FxL	kgf.m	108	208	332
		N.m	1058	2038	3254
Weight (Motor excluded)		kg	55	65	125

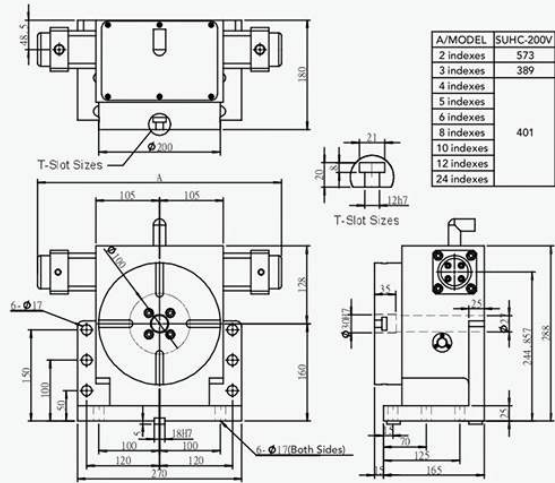
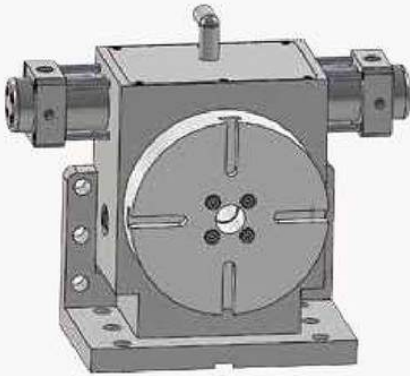
■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.

## Dimensional Drawings:

### SUHC-200V

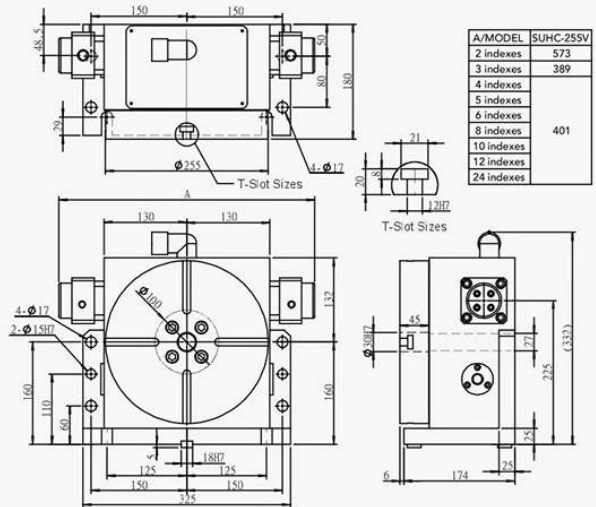
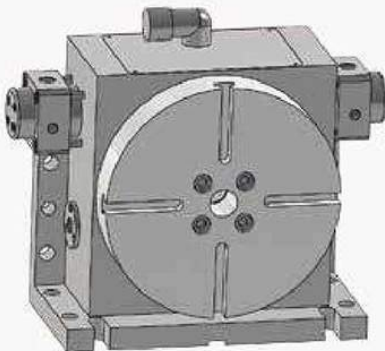
Unit: mm

26



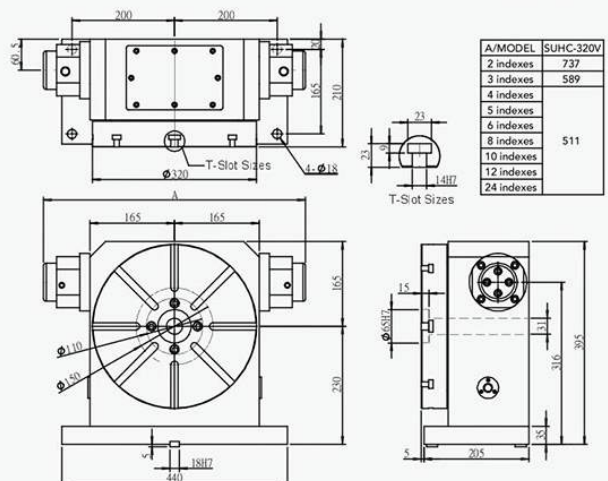
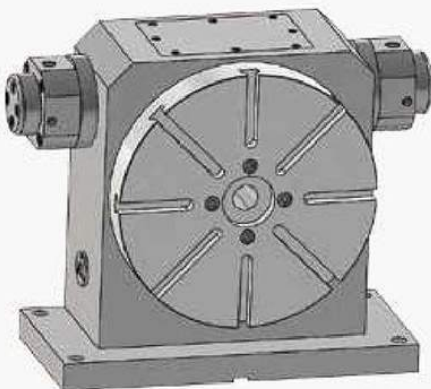
### SUHC-255V

Unit: mm



### SUHC-320V

Unit: mm



\* PAINTING COLOR: Choice of shining silver or yellow color.

Horizontal

SUHC-340

SUHC-470

SUHC-600

SUHC-800

# SUHC series

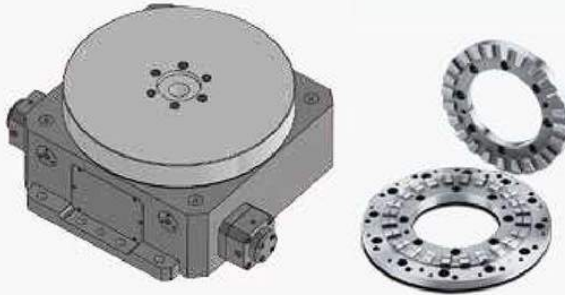
## HYDRAULIC TOOTH TYPE ROTARY TABLE Tooth Type Hydraulic Positioning (Non-CNC Control)

- Table diameter provides a choice of Ø340, Ø470, Ø600 and Ø800mm, etc.
- Employs three-piece clutch gear with accuracy reaching  $\pm 5$  sec. Suitable for heavy cutting.
- Choice of 4, 6, 8, 12 and 24 indexes.
- Choice of special indexes 2, 3, 5, 9,...

### Model Identification of Rotary Table

# SUHC-340

Model      Tooth Type  
Hyd. Positioning      Table Diameter



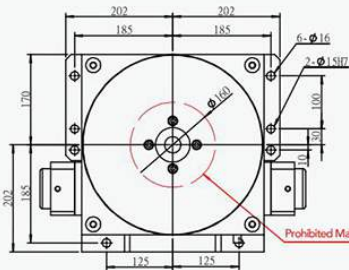
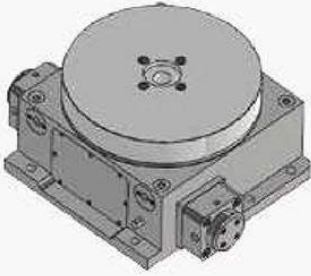
Employs three-piece clutch gear  
Accuracy  $\pm 5$  sec.

MODEL		UNIT	SUHC-340	SUHC-470	SUHC-600	SUHC-800
Table diameter		mm	Ø340	Ø470	Ø600	Ø800
Center hole diameter		mm	Ø65H7	Ø90H7	Ø110H7	Ø120H7
Center hole depth		mm	11	12	12	40
Through hole diameter		mm	31	41	53	80
Height of table (Horizontal)		mm	210	240	260	305
Indexing number (Standard)		-	4 / 6 / 8 / 12 / 24 (Standard indexes)			
Indexing number (Spec.)		-	2 / 3 / 5 / 9 (Special indexes)			
Indexing accuracy		sec.	$\pm 5$	$\pm 5$	$\pm 5$	$\pm 5$
Repeatability		sec.	$\pm 1$	$\pm 1$	$\pm 1$	$\pm 1$
Clamping method	Hyd. pressure	kg/cm <sup>2</sup>	35	35	35	35
Unclamp / clamp time		s	0.6/0.1	0.8/0.1	0.8/0.1	0.6/0.3
Time of rotating 90°		s	2.5	2.7	4	4
Clamping torque		kgf.m	57	86	144	280
		N.m	558	843	1411	2744
Allowable instant inertia	$J = \frac{W \cdot D^2}{8}$	kg-m <sup>2</sup>	21.25	45	125	300
Allowable load	Horizontal	kg	500	700	1250	2400
	F (Hori.)	kgf	1560	3970	6448	9600
Allowable cutting force (Clamped status)	FxL (Hori.)	N	15288	38906	63190	94080
		kgf.m	145	550	840	1950
	FxH (Hori.)	N.m	1421	5390	8232	19110
		kgf.m	332	1428	1980	4000
Weight (Motor excluded)		N.m	3254	13994	19404	39200
		kg	120	270	450	1000

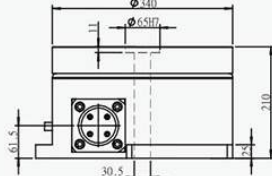
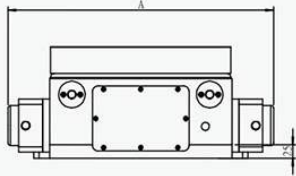
■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.

## SUHC-340

Unit: mm

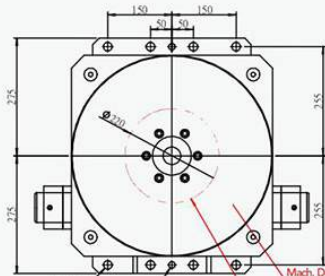
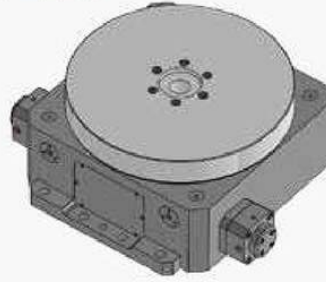


A/MODEL	SUHC-340
2 indexes	706.3
3 indexes	579
4 indexes	501
5 indexes	
6 indexes	
8 indexes	
10 indexes	
12 indexes	
24 indexes	

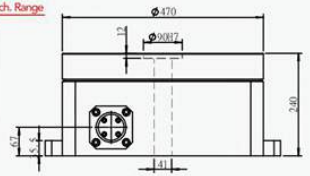
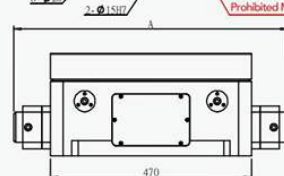


## SUHC-470

Unit: mm

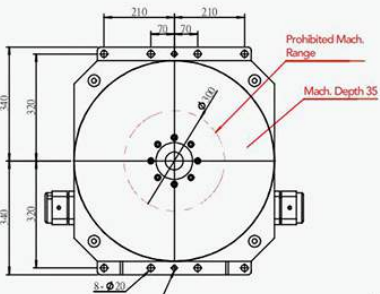
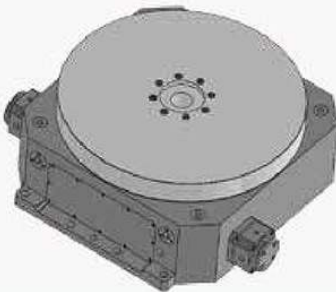


A/MODEL	SUHC-470
2 indexes	1037
3 indexes	751
4 indexes	641
5 indexes	
6 indexes	
8 indexes	
10 indexes	
12 indexes	
24 indexes	

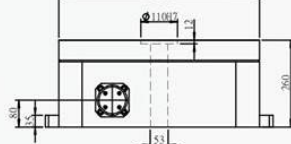
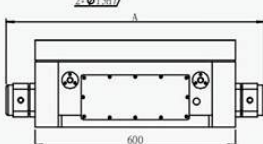


## SUHC-600

Unit: mm

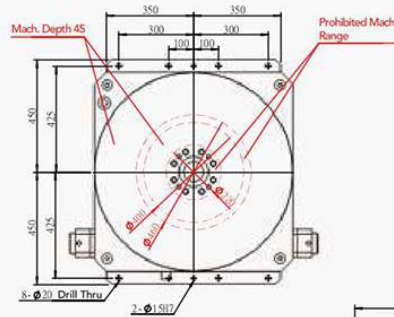


A/MODEL	SUHC-600
2 indexes	1179
3 indexes	905
4 indexes	771
5 indexes	
6 indexes	
8 indexes	
10 indexes	
12 indexes	
24 indexes	

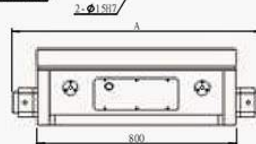


## SUHC-800

Unit: mm



A/MODEL	SUHC-800
2 indexes	1444
3 indexes	1111
4 indexes	1001
5 indexes	
6 indexes	
8 indexes	
10 indexes	
12 indexes	
24 indexes	



\* PAINTING COLOR: Choice of shining silver or yellow color.

# FSA series

## SINGLE ARM 5-AXIS TILTING SWIVELING ROTARY TABLE

Tilting Axis: Hydraulic Brake

Swiveling Axis: Pneumatic Brake (Upon customer req.)

- Ø170mm table diameter.
- Employs high rigidity, extra large radial and axial bearing.
- The tilting axis employs the latest full circumference brake, featuring even braking force without runout. Maximum clamping area, higher clamping force, no vibration and no braking delay is required. High torque combined with compact, rigid and enclosed structure ensure high cutting quality.
- Please provide the motor appearance information according to the motor brand, which will facilitate design and planning. For details contact us.

### Model Identification of Rotary Table

# FSA-170

Single Supp. Table Diameter

5-Axis Swiveling Axis: Pneumatic A  
Tilting Axis: Hydraulic H

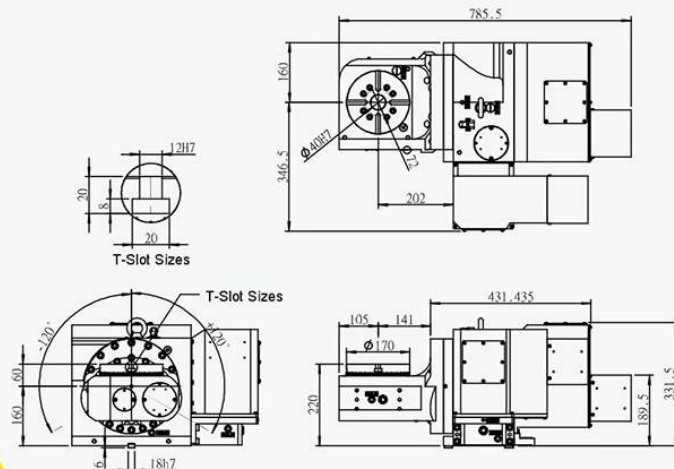


MODEL	UNIT	FSA-170		
Table diameter		mm	Ø170	
Center hole diameter		mm	Ø40H7	
Through-hole diameter		mm	Ø40	
90° vertical height		mm	160	
0° horizontal height		mm	220	
Dist. from center to table		mm	60	
T-slot width of table		mm	12H7	
Guide key width on tilting axis		mm	18h7	
Min. setting angle		deg.	0.001	
Servo motor model	Motor Brand	Tilt axis	Swiveling axis (Stra.)	
	FANUC	α8i / β12is	α4i / β8is	
	Mitsubishi	HF-154S	HF-104S	
Positioning accuracy		sec.	60	20
Repeatability		sec.	8	6
Clamping torque		N.m	600	250
Clamping method		kg/cm <sup>2</sup>	35(Hyd.)	5~7 (Pneu.)
Teeth ratio		-	1:120	1:90
Max. table speed (FANUC α motor)		rpm	22.2	33.3
Allowable load capacity	0° Hori.		kg	60
	0-90° Tilting		kg	45
Allowable cutting force (Clamped status)	F		N	7000
	FxL		N.m	Pneu.: 200 Hyd.: 350
	FxL		N.m	Pneu.: 300 Hyd.: 400
Allowable torque on worm gear		N.m	550	85
Tilting angle		deg.	±120	
Allowable inertia $J = \frac{W \cdot D^2}{8}$		kg.m <sup>2</sup>	0.20	
Weight (Motor excluded)		kg	177	

■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.

### Dimensional Drawings:

Unit: mm



\* PAINTING COLOR: Choice of shining silver or yellow color.

# CTH series 4½-Axis Rotary Table

Tilting Axis: Manual  
Swiveling Axis: Hydraulic Brake

- Ø255mm table diameter.
- Employs high rigidity, extra large radial and axial bearing.
- Upon request, Japanese made worm/worm gear are available.
- Various sheet metal guards are available to suit various models of motors. Contact us for detail.
- Angle is set manually through a worm/ worm gear mechanism, which increases tilting strength and helps to support the weight of the rotary table.

## Model Identification of Rotary Table

**CTH-255**

Manu. Tilt Axis      Table Diameter  
4½-Axis      Hyd. Brake

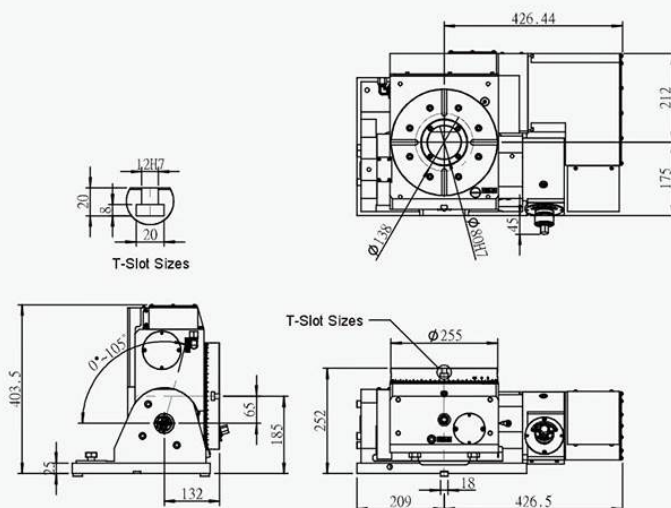


MODEL	UNIT	CTH-255		
Table diameter		mm	Ø255	
Center hole diameter		mm	Ø80H7	
Through-hole diameter		mm	Ø80	
Height of table (Horizontal)		mm	252	
Swiveling axis center to table surf.		mm	132	
Height of table (Vertical)		mm	185	
Swiveling axis center to table center		mm	65	
T-slot width of table		mm	12H7	
Guide key width on tilting axis		mm	18h7	
Min. setting angle		deg.	0.001	
Servo motor model	Motor Brand	Swiv. axis (Stra.)	Tilt. axis (Manu.)	
	FANUC	α4i / β8is		
	Mitsubishi	HF-104S		
Positioning accuracy		sec.	15	
Repeatability		sec.	4	
Clamping torque		N.m	600	
Clamping method		kg/cm²	35 (Hyd.)	
Teeth ratio		-	1:72	
Max. table speed (FANUC α motor)		rpm	33.3	
Allowable load capacity	0° Hori.		kg	150
	0-90° Tilting		kg	80
Allowable cutting force (Clamped status)	F		N	20000
	FxL		N.m	1120
	FxL		N.m	700
Allowable torque on worm gear		N.m	550	-
Tilting angle		deg.	0°~105°	
Weight (Motor excluded)		kg	165	

■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.

## Dimensional Drawings:

Unit: mm



\* PAINTING COLOR: Choice of shining silver or yellow color.

# FEH series

## 5-AXIS TILTING SWIVELING ROTARY TABLE

Hydraulic Brake (Tilting Axis)  
Pneumatic Brake (Swiveling Axis)

Models over 255 are designed with  
hydraulic brake on two axes.

- Table diameter provides a choice of Ø125, Ø170, Ø210, Ø255, Ø320 and Ø400mm.
- Employs high rigidity, extra large radial and axial bearing.
- Upon customer request, models with Ø170, Ø210, Ø250 can be equipped with Japanese made worm / worm gear.
- For models over 255, the tilting axis employs the latest full circumference brake, featuring even braking force without runout. Maximum clamping area, higher clamping force, no vibration and no braking delay is required. High torque combined with compact, rigid and enclosed structure ensure high cutting quality.
- For models over 170, all support units employ the full circumference brake and large hole Japanese-made roller bearing.

FEH-125

FEH-210

FEH-320

FEH-170

FEH-255

FEH-400

Model Identification of Rotary Table

# FEH-125

Flat Bottom      Table Diameter  
5-Axis      Hyd. Brake on Tilting Axis



MODEL	UNIT	FEH-125	FEH-170	FEH-210	FEH-255	FEH-320	FEH-400							
Table diameter		mm	Ø125	Ø170	Ø210	Ø255	Ø320	Ø400						
Center hole diameter		mm	Ø25H7	Ø40H7	Ø40H7	Ø80H7	Ø120H7	Ø120H7						
Through-hole diameter		mm	Ø25	Ø40	Ø40	Ø80	Ø120	Ø120						
90° vertical height		mm	155	190	190	235	270	300						
0° horizontal height		mm	225	260	260	315	370	400						
T-slot width of table		mm	12H7	12H7	12H7	12H7	14H7	14H7						
Guide key width on tilting axis		mm	Ø14h7	Ø18h7	Ø18h7	Ø18h7	Ø18h7	Ø18h7						
Min. setting angle		deg.	0.001	0.001	0.001	0.001	0.001	0.001						
Servo motor model	Motor Brand	Tilt axis	Swivel axis (Straight shaft)	Tilt axis	Swivel axis (Straight shaft)	Tilt axis	Swivel axis (Straight shaft)	Tilt axis	Swivel axis (Straight shaft)	Tilt axis	Swivel axis (Straight shaft)	Tilt axis	Swivel axis (Straight shaft)	
	FANUC	α2i/B4is	α2i/B4is	α4i/B8is	α4i/B8is	α4i/B8is	α8i/B12is	α4i/B8is	α8i/B12is	α8i/B12is	α8i/B12is	α12i/B22is	α8i/B12is	
Positioning accuracy		sec.	60	40	60	20	60	20	50	15	50	15	50	15
			Mitsubishi	HF-105T	HF-KP73 HG-KR73 HF-105S	HF-104T HF-154T	HF-104S	HF-104T HF-154T	HF-104S	HF-154S	HF-104S	HF-204	HF-154S	HF-354S
Repeatability		sec.	8	6	8	6	8	6	8	6	8	6	8	6
Clamping torque		Pneu. 5-7kg/cm <sup>2</sup>	N.m	-	80	-	250	-	250	-	-	-	-	-
		Hyd.	N.m	150 (20~25 kg/cm <sup>2</sup> )	-	400 (20~25 kg/cm <sup>2</sup> )	-	400 (20~25 kg/cm <sup>2</sup> )	-	1000 (25~30 kg/cm <sup>2</sup> )	700 (25~30 kg/cm <sup>2</sup> )	1300 (25~30 kg/cm <sup>2</sup> )	1180 (25~30 kg/cm <sup>2</sup> )	2000 (25~30 kg/cm <sup>2</sup> )
Teeth ratio		-	1:60	1:60	1:90	1:90	1:90	1:90	1:120	1:120	1:120	1:120	1:120	1:120
Max. table speed (FANUC α motor)		rpm	44.4	44.4	33.3	33.3	33.3	33.3	22.2	22.2	16.6	16.6	11.1	11.1
Allowable load capacity	0° Horizontal		kg	45	65	80	110	200	230					
	0-90° Vert.		kg	30	50	65	75	110	150					
Allowable cutting force (Clamped status)	F		N	4500	7000	9000	16000	20000	30000					
	FxL		N.m	250	300	300	750	1180	2000					
	FxL		N.m	260	350	380	700	1180	2500					
Allowable torque on worm gear		N.m	85	170	250	380	780	1200						
Tilting angle		kg/cm <sup>2</sup>	+30~-120	+30~-120	+30~-120	+30~-120	+30~-120	+30~-120	+30~-120					
Allowable inertia	$J = \frac{W \cdot D^2}{8}$		deg.	0.14	0.25	0.25	0.9	2.7	9.7					
Weight (Motor excluded)		kg	105	170	175	350	600	770						

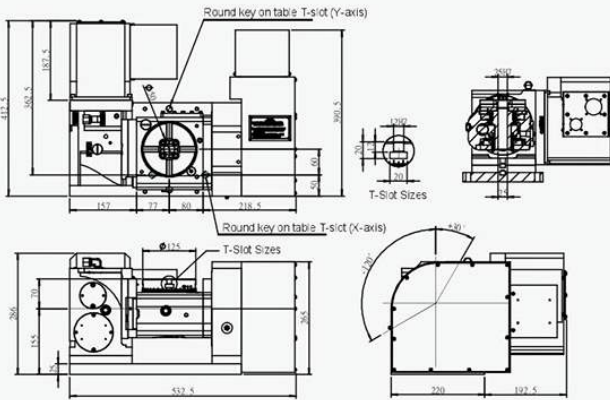
■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.



# Dimensional Drawings:

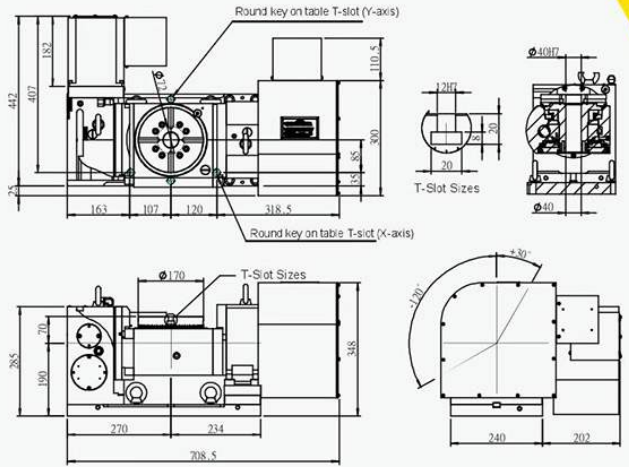
## FEH-125

Unit: mm



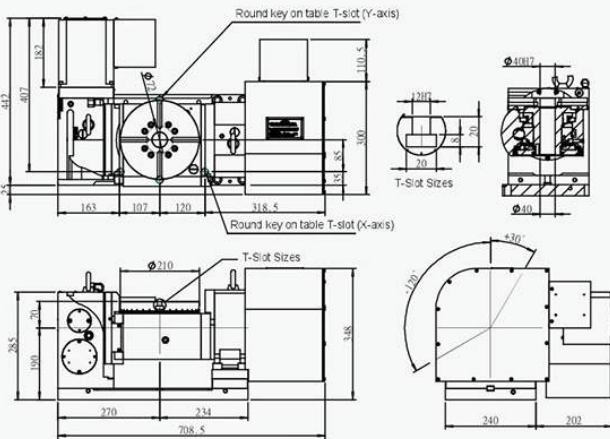
## FEH-170

Unit: mm



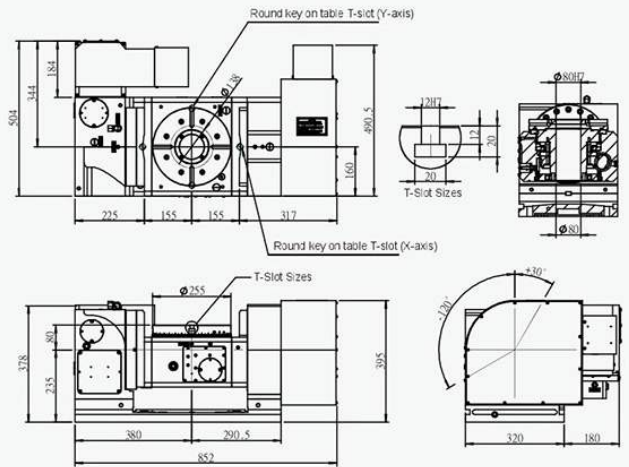
## FEH-210

Unit: mm



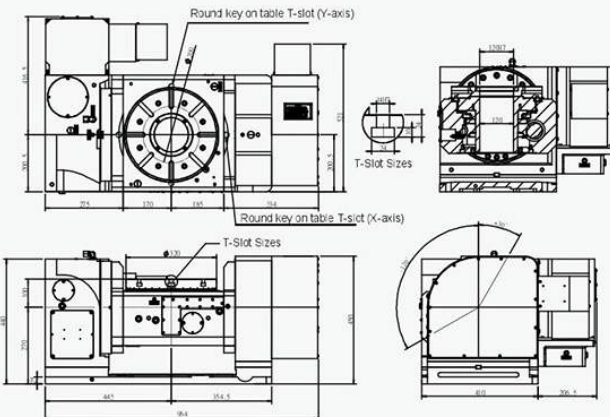
## FEH-255

Unit: mm



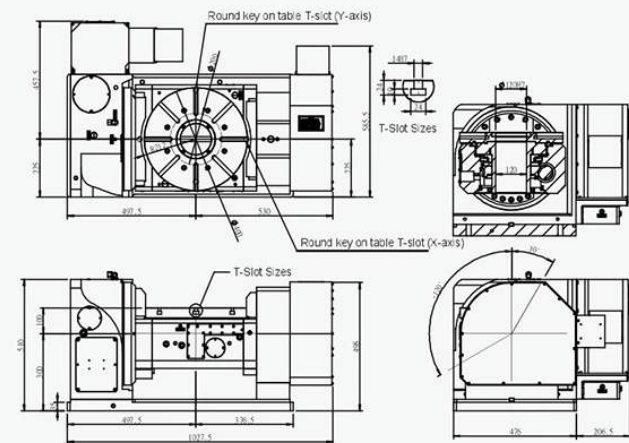
## FEH-320

Unit: mm



## FEH-400

Unit: mm



\* PAINTING COLOR: Choice of shining silver or yellow color.

# STH series SWIVELING SPINDLE HEAD

## Hydraulic Full Circumference Brake

- Employs high rigidity, extra large radial and axial bearing.
- The spindle head employs the latest full circumference brake, featuring even braking force without runout. Maximum clamping area, higher clamping force, no vibration and no braking delay is required. High torque combined with compact, rigid and enclosed structure ensure high cutting quality.
- High quality cast iron with maximum durability of material, increased wall thickness of body to increase the structural strength. One-piece thru-hole spindle integrates features of high strength, heavy cutting resistance and high machining accuracy.
- Various sheet metal guards are available to suit various brands of motors. Contact us for detail.



### Model Identification

# STH-255

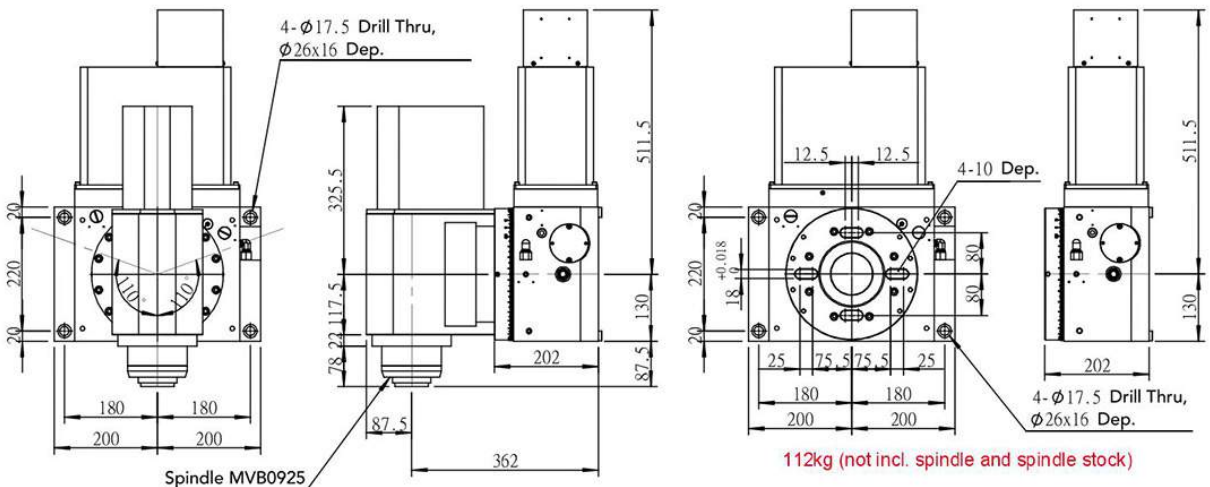
Model | Hydraulic Full Circumference Brake | Connecting Plate Diameter

MODEL	UNIT	STH-255
Tilting angle	deg.	±110
Teeth ratio	/	1:120
Width of guide block	mm	18h7
Servo motor type (Recommended)	Motor Brand	Tilting Axis
		FANUC α8i / β12is
	Mitsubishi	HF-154S
Max. speed of indexing plate	rpm	22.2
Indexing accuracy	sec.	15
Repeatability accuracy	sec.	6
Clamping torque	N.m	600
Allowable torque on worm gear	N.m	380
Range of tilting angle	deg.	±110
Clamping method	kg.m <sup>2</sup>	35(Hyd.)
Minimum setting angle	deg.	0.001
Weight of spindle head (motor not included)	kg	177

■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.

## Dimensional Drawings:

Unit: mm



# STD series

## CNC ROTARY TABLE FOR TOOL GRINDER

Pneumatic Brake

### Model Identification

# STD-100B5

Model

Height of Center

Tool Shank : BT-50



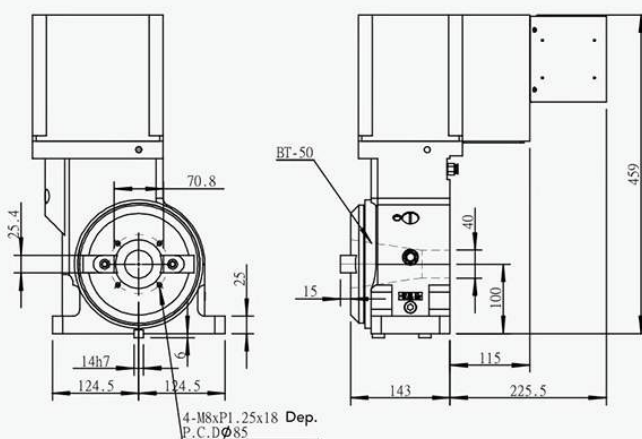
MODEL	UNIT	STD-100B5
Height of center	mm	100
Center hole diameter	/	Ø40
Width of guide block	mm	14h7
Servo motor type (Recommended)	FANUC	$\alpha 2i$ / B4is ( $\alpha 4i$ / B8is)
	Mitsubishi	HF-75S(T), HF-104S(T)
	Siemens	1FK7060
	Yaskawa	SGMGV09A
Teeth ratio	/	1:72
Max. speed of rotary table	rpm	44.4
Allowable torque on worm gear	N.m	170
Clamping method (Pressure used: air)	kg.m <sup>2</sup>	5~7
Clamping torque	N.m	200
Indexing accuracy	sec.	20
Repeatability accuracy	sec.	4
Minimum setting angle	deg.	0.001
Tool shank type	/	BT-50

MODEL	UNIT	SWH-255
Width of guide block	mm	18h7
Servo motor type (Recommended)	FANUC	$\alpha 8i$ / B12is
	Mitsubishi	HF-154S(T)
	Siemens	1FK7063
	Yaskawa	SGMGV13A
Teeth ratio	/	1:120
Max. speed of rotary table	rpm	33.3
Allowable torque on worm gear	N.m	550
Clamping method (Pressure used: hyd.)	kg.m <sup>2</sup>	35
Clamping torque	N.m	600
Indexing accuracy	sec.	15
Repeatability accuracy	sec.	4
Minimum setting angle	deg.	0.001

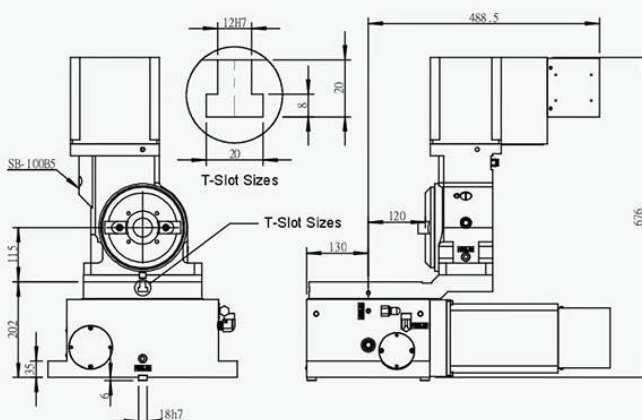
■ The specifications, dimensions and design characteristics shown in this catalogue are subject to change without prior notice.

### Dimensional Drawings:

Unit: mm



### Used together with SWH-255 horizontal body



# FEUH-120 CNC SPINDLE HEAD

## Hydraulic Full Circumference Brake

- Employs highly rigid radial bearing.
- The spindle head employs the latest full circumference brake, featuring even braking force without runout. Maximum clamping area, higher clamping force, no vibration and no braking delay is required. High torque combined with compact, rigid and enclosed structure ensure high cutting quality.
- The body is manufactured from rigid aluminum with high durability of material and heavy load resistance.
- The spindle head is excellent for machining aluminum molds and special angle drilling.
- For details of various motor brands, contact the manufacturer.

### Model Identification

**FEUH-120**

Model      Hydraulic      Specification

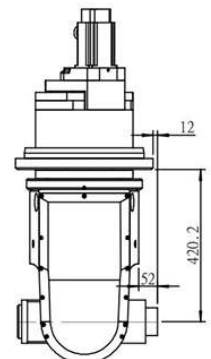
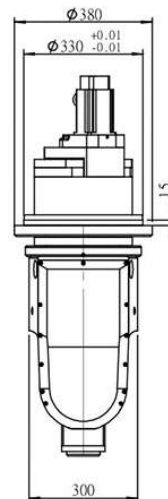
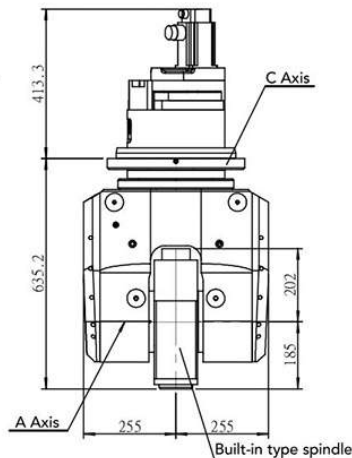
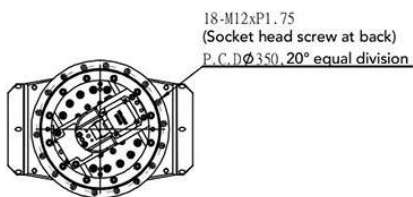


MODEL	UNIT	C AXIS	A AXIS
Rated output torque	N.m	500	500
Clamping method (Hydraulic)	kg.m <sup>2</sup>	35	35
Clamping torque	N.m	600	400
Clamping cutting force	N	10000	16000
Rotating speed	rpm	15	20
Range of swiveling angle	deg.	±245	±110
Teeth ratio	/	1:270	1:120
Indexing accuracy	sec.	20	20
Repeatability accuracy	sec.	8	8
Linear scale; RENISHAW (Opt.)	/	RESA-115	RESA-150
Servo motor type (Recommended)	FANUC	α2i / β4is	α2i / β4is
	Mitsubishi	HF-105S(T)	HF-105S(T)
Minimum setting angle	deg.	0.001	0.001

SPINDLE	UNIT	SMS120T
Rated power	kW	10
Rated torque	N.m	5.5
Max. speed	rpm	30000
Volt	V	350
Tool shank type	/	ISO30

### Dimensional Drawings:

#### FEUH-120



Unit: mm

# SUAR series

## ROTARY TYPE TAILSTOCK Pneumatic Brake

Model Identification of Rotary Type Tailstock

# SUAR-170

Pneumatic Rotary Type  
 Model Table Dia.

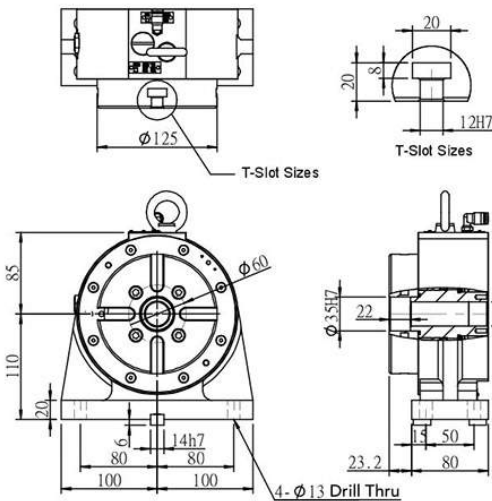
- Table diameter provides a choice of  $\varnothing 125$ ,  $\varnothing 170$ ,  $\varnothing 210$  and  $\varnothing 250$ mm.
- Employs high rigidity, extra large radial and axial bearing.



### Dimensional Drawings:

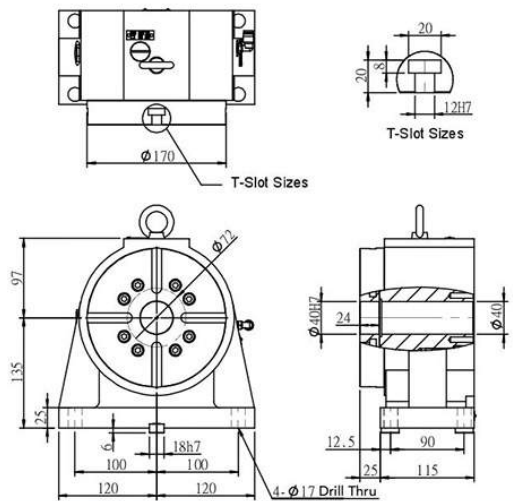
#### SUAR-125 (16kg)

Unit: mm



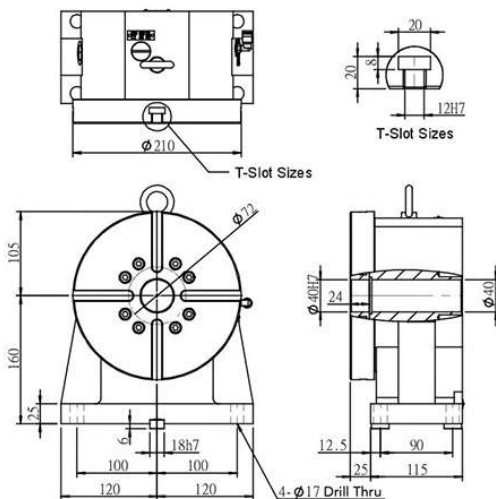
#### SUAR-170 (30kg)

Unit: mm



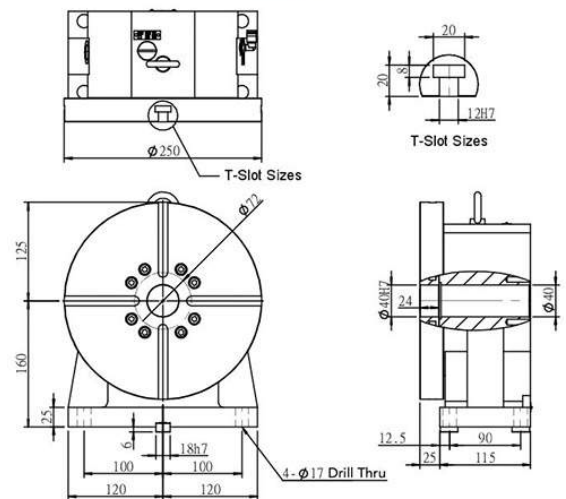
#### SUAR-210 (34kg)

Unit: mm



#### SUAR-250 (37kg)

Unit: mm



\* PAINTING COLOR: Choice of shining silver or yellow color.

SUARC-125 SUARC-170  
SUARC-210

# SUARC series

## ROTARY TYPE TAILSTOCK Pneumatic Brake

- Table diameter provides a choice of  $\varnothing 125$ ,  $\varnothing 170$  and  $\varnothing 210$ mm, etc.
- Employs high precision high rigidity cross type roller bearing.
- Suitable for small type machine tools.



Model Identification of Rotary Type Tailstock

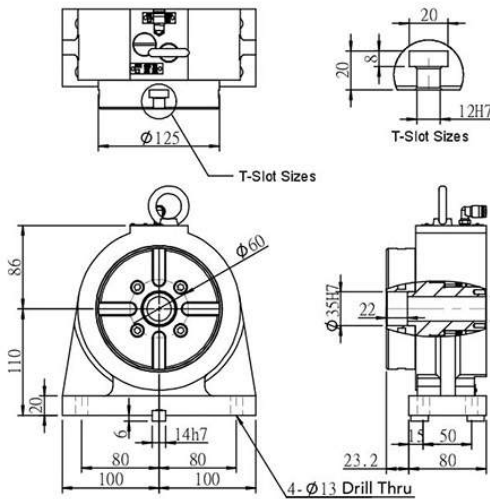
**SUARC-125**

Model	Pneumatic (A) Hydraulic (H)	Product Type Rotary Type	Table Dia.
-------	--------------------------------	-----------------------------	------------

### Dimensional Drawings:

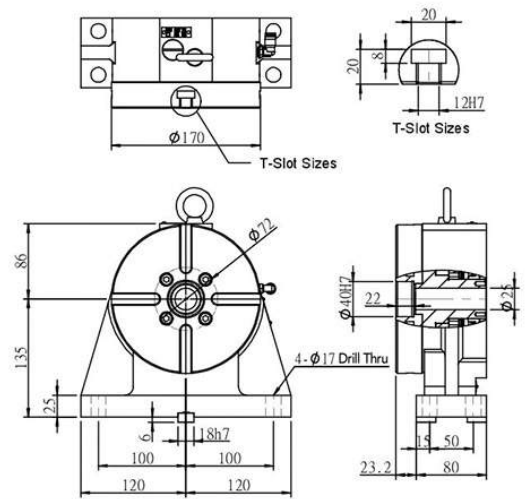
#### SUARC-125 (15kg)

Unit: mm



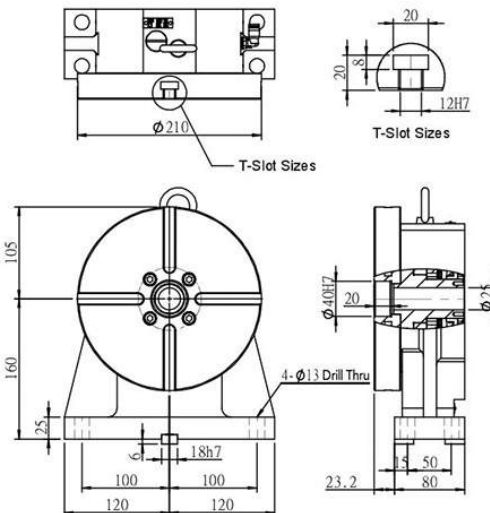
#### SUARC-170 (22kg)

Unit: mm



#### SUARC-210 (26kg)

Unit: mm



\* PAINTING COLOR: Choice of shining silver or yellow color.

# SUHR series

## ROTARY TYPE TAILSTOCK Hydraulic Brake

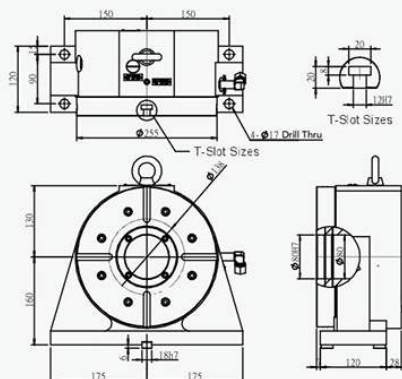
- Table diameter provides a choice of Ø255, Ø320, Ø400, Ø500 and Ø630mm, etc.



### Dimensional Drawings:

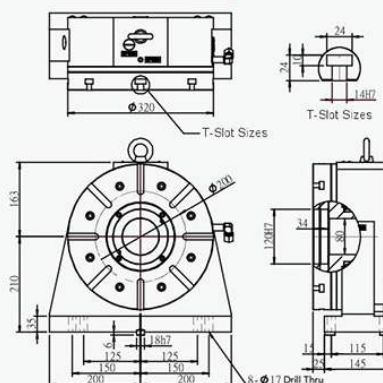
#### SUHR-255 (58kg)

Unit: mm



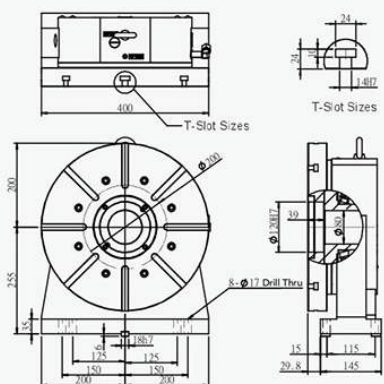
#### SUHR-320 (85kg)

Unit: mm



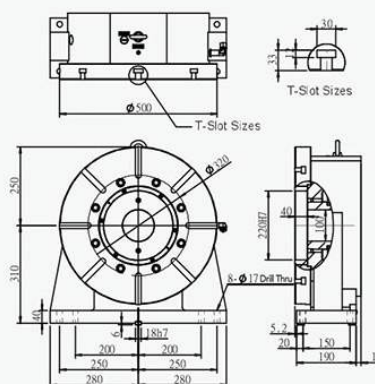
#### SUHR-400 (105kg)

Unit: mm



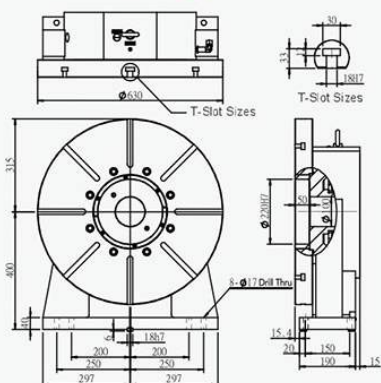
#### SUHR-500 (256kg)

Unit: mm



#### SUHR-630 (338kg)

Unit: mm



\* PAINTING COLOR: Choice of shining silver or yellow color.

SUHR-255	SUHR-320
SUHR-400	SUHR-500
SUHR-630	

Model Identification of Rotary Type Tailstock

# SUHR-255

S	U	H	R	-	2	5	5
Hydraulic			Table Dia.				
Model		Rotary Type					

# SUTT/SUTTA/SUTTH series CENTER TYPE TAILSTOCK

## Manual Type

SUTT-125/170/210/255/320/400

## Pneumatic / Hydraulic Type

SUTTA(H)-125/170/210/255/320/400

- The tailstock is ruggedly constructed for high rigidity.
- For models over 125, #MT4 center is used. #400 MT5.
- The mini type 125S is suitable for small type machine tools for light cutting applications.



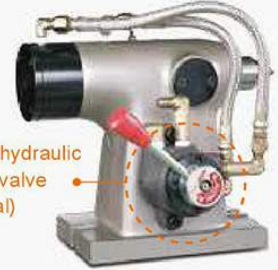
▲ SUTT-125

Manual pneumatic  
change valve  
(Optional)



▲ SUTTA-255

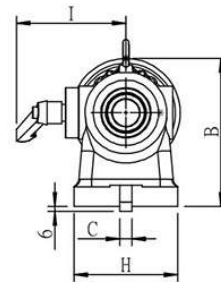
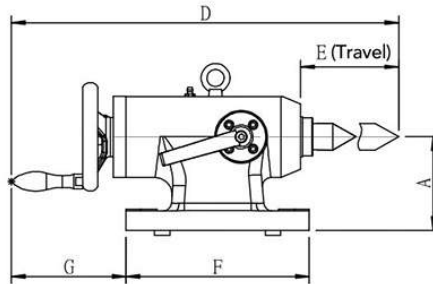
Manual hydraulic  
change valve  
(Optional)



▲ SUTTH-320

## Dimensional Drawings:

### SUTT

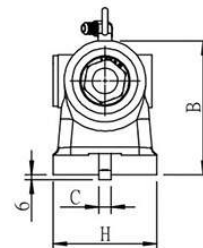
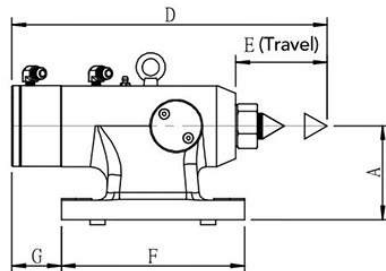


Unit: mm

Model / Specif.	A	B	C	D	E	F	G	H	I	CENTER (Morse)
SUTT-125S	110	140.5	14	294/324	30	140	137.5	80	105.5	#MT2
SUTT-125	110	157	14	405/455	50	215	134.5	122	128	#MT4
SUTT-170	135	182	18	405/455	50	215	134.5	122	128	#MT4
SUTT-210	160	207	18	405/455	50	215	134.5	122	128	#MT4
SUTT-255	160	207	18	405/455	50	215	134.5	122	128	#MT4
SUTT-320	210	257	18	405/455	50	215	134.5	122	128	#MT4
SUTT-400	255	302	18	461/521	60	270	134.5	160	141	#MT5

## Dimensional Drawings:

### SUTTA SUTTH



Unit: mm

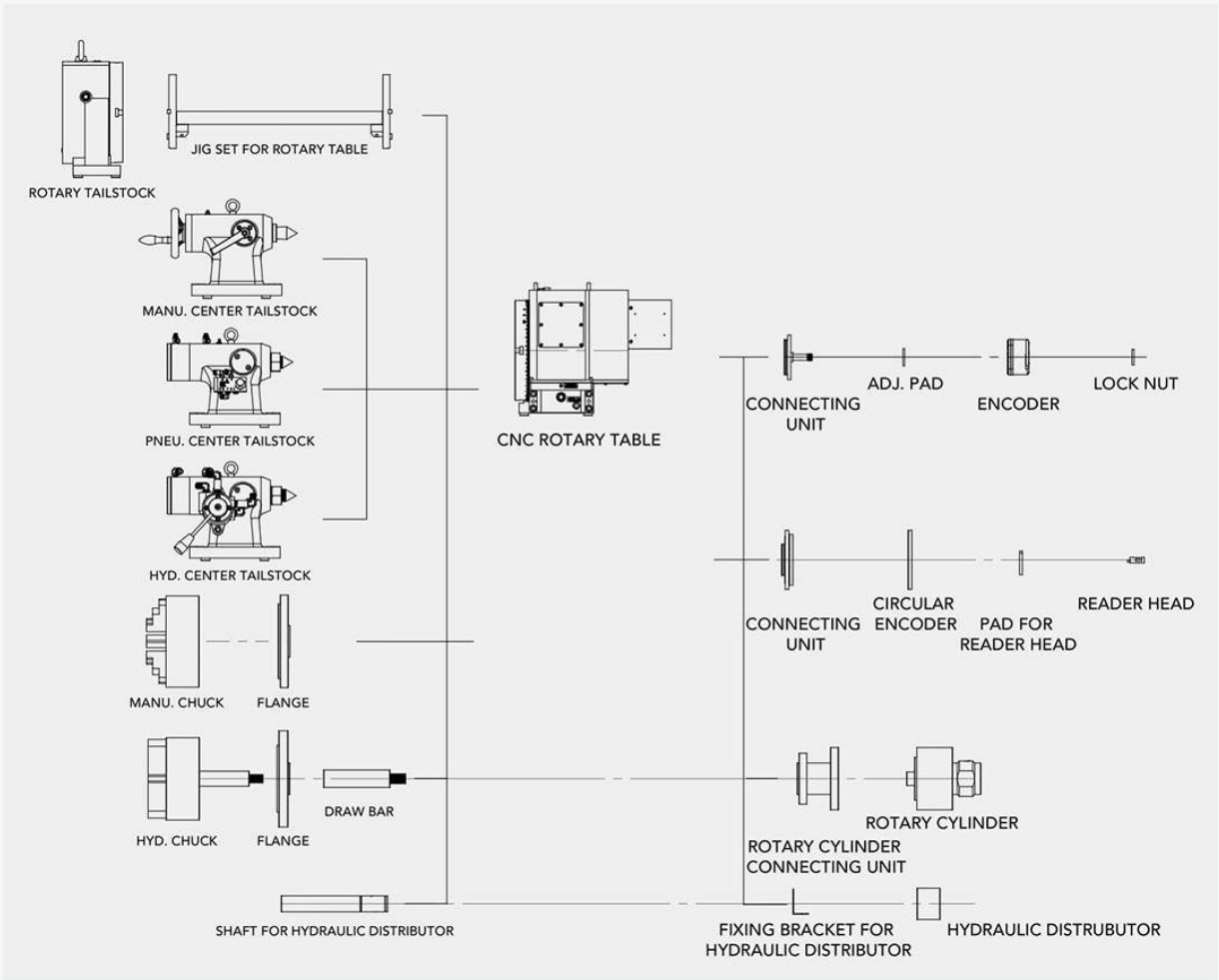
Model / Specif.	A	B	C	D	E	F	G	H	CENTER (Morse)
SUTTA/H-125S	110	140.5	14	215.2/245.2	30	140	58	80	#MT2
SUTTA/H-125	110	157	14	320/370	50	215	59	122	#MT4
SUTTA/H-170	135	182	18	320/370	50	215	58	122	#MT4
SUTTA/H-210	160	207	18	320/370	50	215	58	122	#MT4
SUTTA/H-255	160	207	18	320/370	50	215	58	122	#MT4
SUTTA/H-320	210	257	18	320/370	50	215	58	122	#MT4
SUTTA/H-400	255	308	18	442/502	60	270	120	160	#MT5

\* PAINTING COLOR: Choice of shining silver or yellow color.

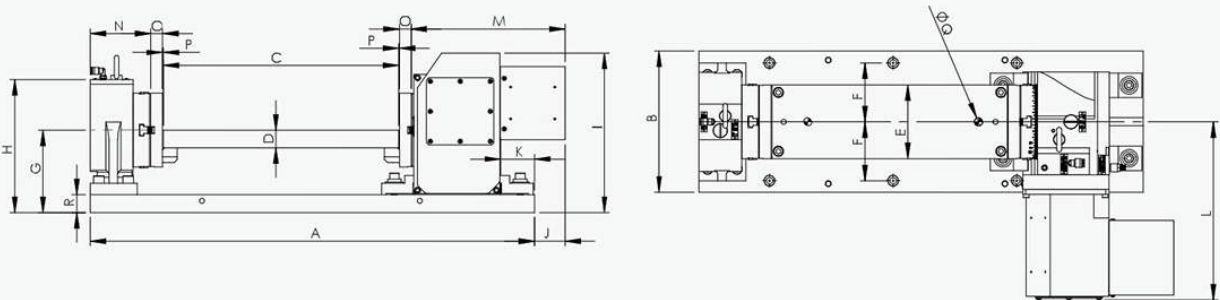


# OPTIONAL ACCESSORIES

## ACCESSORIES APPLICATION DIAGRAM

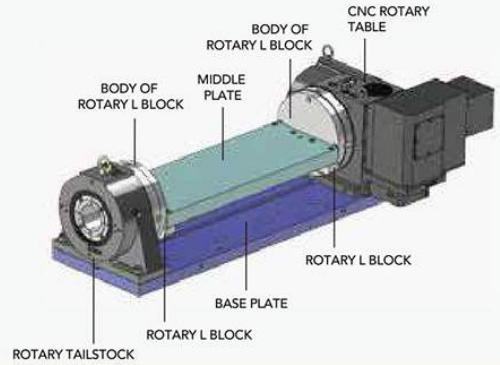
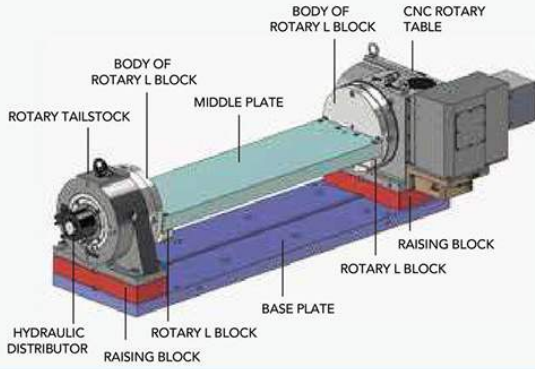


## SPECIFICATIONS OF STANDARD CONNECTING PLATE ASSEMBLY



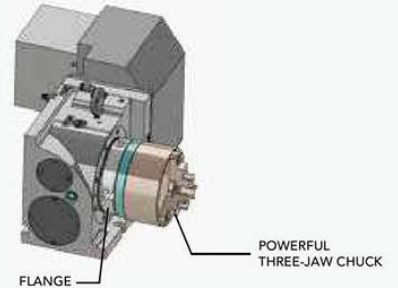
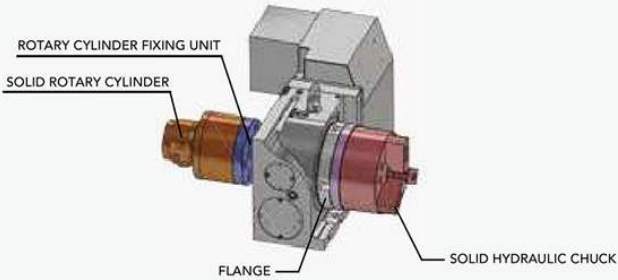
Model / Dimn.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
SUA-125/SUARC-125	755	240	400	30	125	100	140	226	271	51.7	57.8	302.5	261.5	103.2	20	1	14	30
SUA-170/SUARC-170	886	240	500	35	170	100	175	261	316	30	78.5	351.5	261.5	103.2	25	0.5	18	40
SUA-210/SUARC-210	983	240	600	40	200	100	200	286	295	33	75.5	351.5	261.5	103.2	25	0.5	18	40
SUA-250/SUAR-250	1126	240	700	40	250	100	200	297	341	28.5	80	351.5	261.5	103.2	25	1	18	40
SUH-255/SUHR-255	1156	350	700	45	250	100	200	330	353	121.5	77	365.8	398.5	155	25	1	18	40
SUH-320/SUHR-320	1345	400	800	45	300	100	250	413	420	127	76.5	416.5	438.5	160	30	1	18	40
SUH-400/SUHR-400	1468	450	900	45	400	125	295	495	505	105.5	80	457.5	435.5	164.8	30	1	18	40

## APPLICATION DRAWING OF CONNECTING PLATE ASSEMBLY



## SOLID HYDRAULIC CHUCK ASSEMBLY

## POWERFUL THREE-JAW CHUCK



## APPLICATION FIGURE

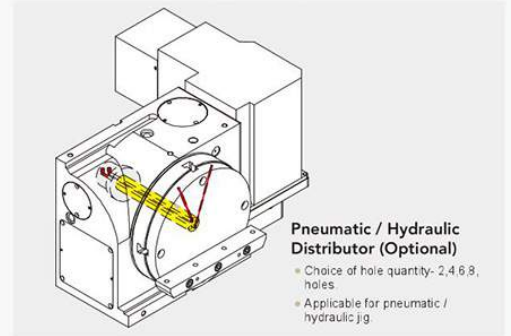
## APPLICATION DRAWING OF PNEUMATIC / HYDRAULIC DISTRIBUTOR



^ SUH-255 + Jig



^ SUH-255  
+ Hydraulic Rotary Cylinder  
+ Hydraulic Chuck



## MANUAL THREE-JAW CHUCK

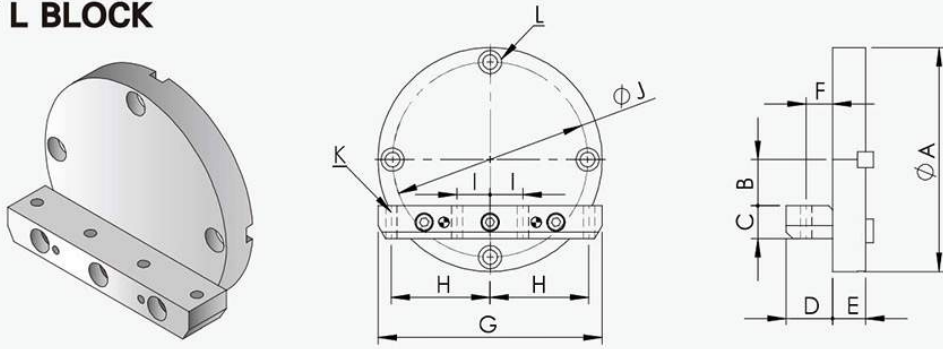
### Specifications



^ FLANGE  
(Connecting plate)

APPL ROTARY TABLE	CHUCK SPEC.	O.D. CLAMPING RANGE	I.D. CLAMPING RANGE	CENTER HOLE SIZE
SUA-125	SC-4	∅3-∅95	∅29-∅84	24
SUA-125	SC-5	∅3-∅110	∅33-∅100	32
SUA-170	SK-6	∅4-∅160	∅55-∅150	45
SUA-170/210/250	SK-7	∅8-∅180	∅62-∅170	58
SUH-170/210/250	SK-8	∅8-∅190	∅68-∅180	58
SUH-255/320	SK-9	∅11-∅220	∅70-∅210	70
	SK-10	∅12-∅260	∅80-∅250	89
SUH-400/500	SK-12	∅15-∅300	∅90-∅290	105
SUH-500/630	SK-16	∅30-∅380	∅110-∅360	160

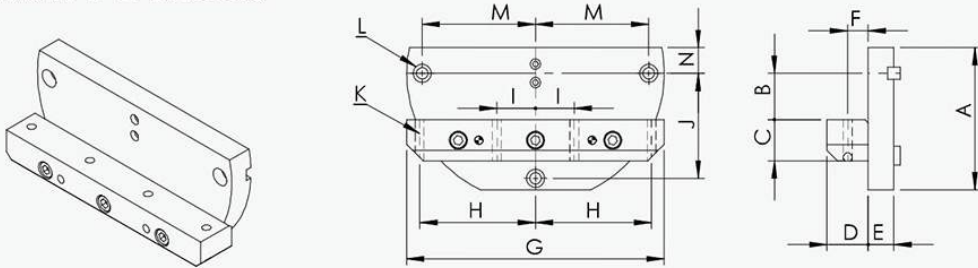
# ROTARY L BLOCK



## Specifications

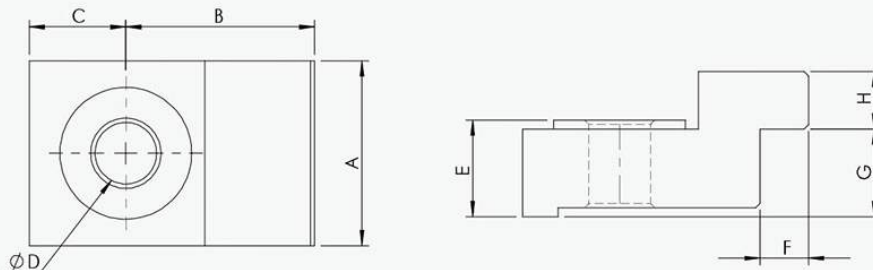
Model / Dimn.	A	B	C	D	E	F	G	H	I	J	K	L
SUA-125	125	30	25	25	20	12	120	50	/	106	2-M10	4-M10
SUA-170	170	35	25	35	25	20	170	75	25	148	4-M10	4-M10
SUA-210	210	40	35	40	25	20	200	82.5	27.5	185	4-M10	4-M10
SUA-250	250	40	40	40	25	20	250	112.5	37.5	205	4-M10	4-M10
SUH-255	255	45	40	40	25	20	250	112.5	37.5	220	4-M10	4-M10
SUH-320	320	45	45	45	30	22.5	300	127.5	42.5	285	4-M12	4-M12

# SEMI-ROTARY L BLOCK



## Specifications

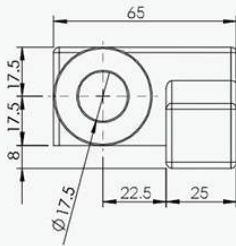
Model / Dimn.	A	B	C	D	E	F	G	H	I	J	K	L	M	N
SUA-210	120	40	35	40	25	20	200	82.5	27.5	84	4-M10	3-M10	92.5	25
SUA-250	130	40	40	40	25	20	250	112.5	37.5	90	4-M10	3-M10	102.5	25
SUH-255	138	45	40	40	25	20	250	112.5	37.5	102	4-M10	3-M10	110	25
SUH-320	178	45	45	45	30	22.5	300	127.5	42.5	130	4-M12	3-M12	142.5	34
SUH-400	183	45	45	45	30	23	400	155	75	136	4-M12	3-M12	180	35
SUH-500	245	45	45	45	30	22.5	500	220	85	188	4-M12	3-M12	225	40



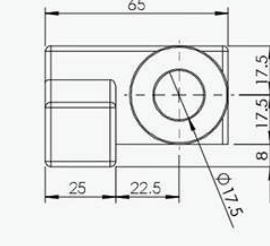
Model / Dimn.	A	B	C	D	E	F	G	H
SUA-125	42	43	22	14	22	11	20	13
SUA-170 SUA-210 SUA-250	42	48.5	35	14	22.5	13.5	25	14
SUH-255	42	48.5	35	17	23	13.5	25	15
SUH-320 SUH-400	47	50.5	36.5	17	26	14	35	17.5
SUH-500 SUH-630 SUH-800	60	33	30	18	58	18	40	18

## SPECIAL PRESSURE PLATE

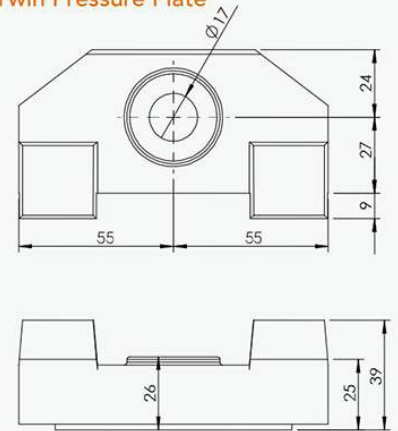
Right Pressure Plate



Left Pressure Plate



Twin Pressure Plate



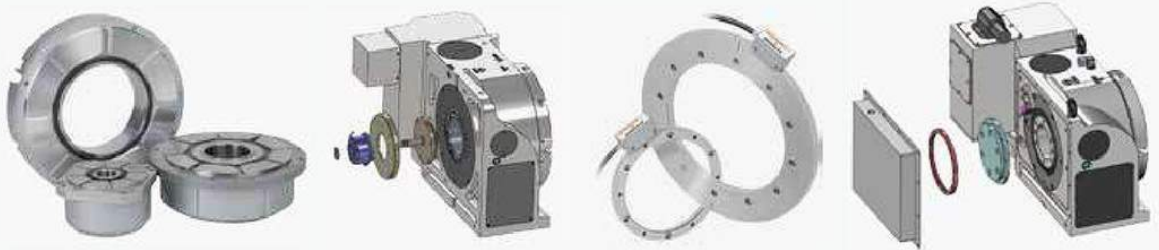
## LINEAR SCALE AND TABLE ACCURACY

## HEIDENHAIN

ANGULAR ENCODER MODEL	CODING ACCURACY	TABLE ACCURACY
RON275 RON285 RON223	$\pm 5''$	10''
RON287C RNC227F	$\pm 2.5''$	8''
RON886	$\pm 1''$	6''

## RENISHAW

CIRCULAR ANGULAR ENCODER MODEL	CODING ACCURACY	TABLE ACCURACY
RESA-115	$\pm 2.44''$	8''
RESA-150	$\pm 1.91''$	8''



## SELECTION OF MOTOR BRANDS AND SPECIFICATIONS

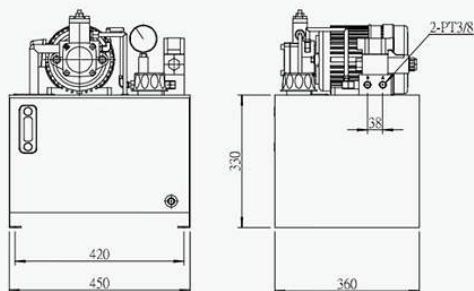
BRAND / MODEL	SUA-125	SUA-170/SUA-210 SUA-250	SUH-255	SUH-320/SUH-400 SUH-500	SUH-630/SUH-800
FANUC	$\alpha 2i/\beta 4is$	$\alpha 4i/\beta 8is$	$\alpha 4i/\beta 8is$	$\alpha 12i/\beta 22is$	$\alpha 22i/\beta 30is$
MITSUBISHI	HF-75T (HF-75S)	HF-104T (HF-104S)	HF-104T/HF-154T (HF-104S/HF154S)	HF-204S/HF-303S	HF-354S
YASKAWA	SGMJV08A	SGMGV09A	SGMGV013A	SGMGV030A	SGMGV030A
SLEMENS	1FK7042	1FK7060	1FK7063	1FK7083	1FK7083
FAGOR	FKM22.30A	FKM22.30A	FKM44.30A	FKM64.30A	FKM66.30A
HELDENHALN	QSY-96A	QSY-116C	QSY-116E	QSY-155B	QSY-155B

# HE-35

## Hydraulic Power Unit (Optional)



- Applicable for hydraulic brake rotary table and rotary type tailstock.
- Also suitable for hydraulic brake rotary table, rotary type tailstock and hydraulic chuck.
- The hydraulic power unit consists of high quality hydraulic parts, featuring minimum noise and low thermal growth.



# AE-35B

## Pneumatic Hydraulic Transducer (Optional)

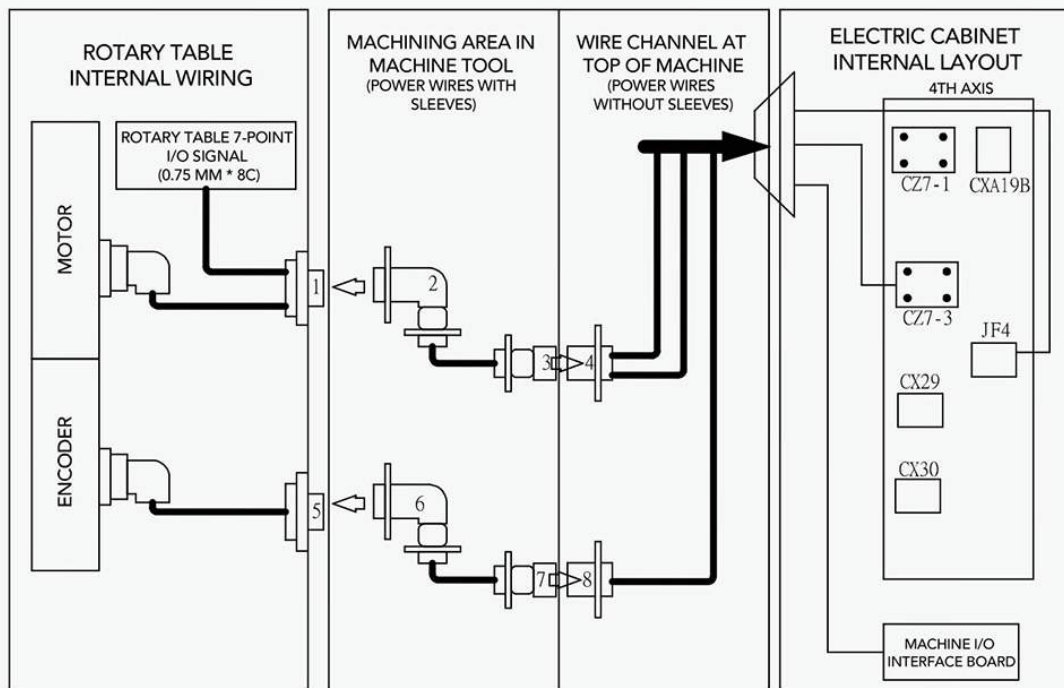


- Suitable for hydraulic brake rotary table.



SAC Single Axis Controller (Optional)

## NC WIRING DIAGRAM

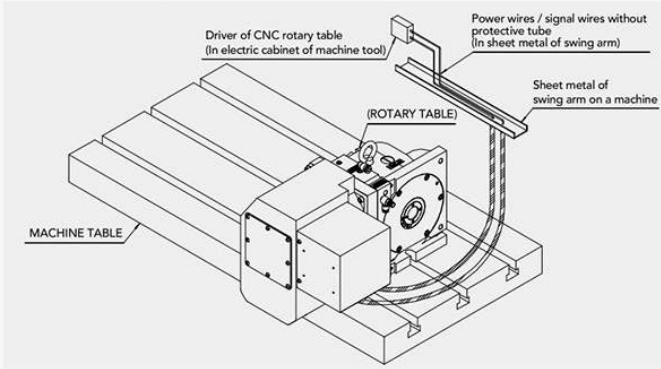


### JAPANESE WIRE MATERIAL SPECIFICATIONS

MILITARY CONNECTOR NO.	1	2	3	4
MILITARY CONNECTOR SPECIFICATION	MS3102A28-11P	MS3108A28-11S	MS3106A28-11P	MS3102A28-11S
MILITARY CONNECTOR NO.	5	6	7	8
MILITARY CONNECTOR SPECIFICATION (FANUC/17in)	MS3102A20-29PW	MS3108A20-29SW	MS3106A20-29PW	MS3102A20-29SW
MITSUBISHI/17in	MS3102A20-29P	MS3108A20-29S	MS3106A20-29P	MS3102A20-29S
MITSUBISHI/19in	MS3102A22-14P	MS3108A20-14S	MS3106A20-14P	MS3102A20-14S

## FIGURE OF ROTARY TABLE CONNECTING TO MACHINE TOOL

- FEATURES:** 1. Allows for synchronous machining with X, Y, Z axes of a machine tool.  
2. Program control is executed directly on the screen of a machine tool.

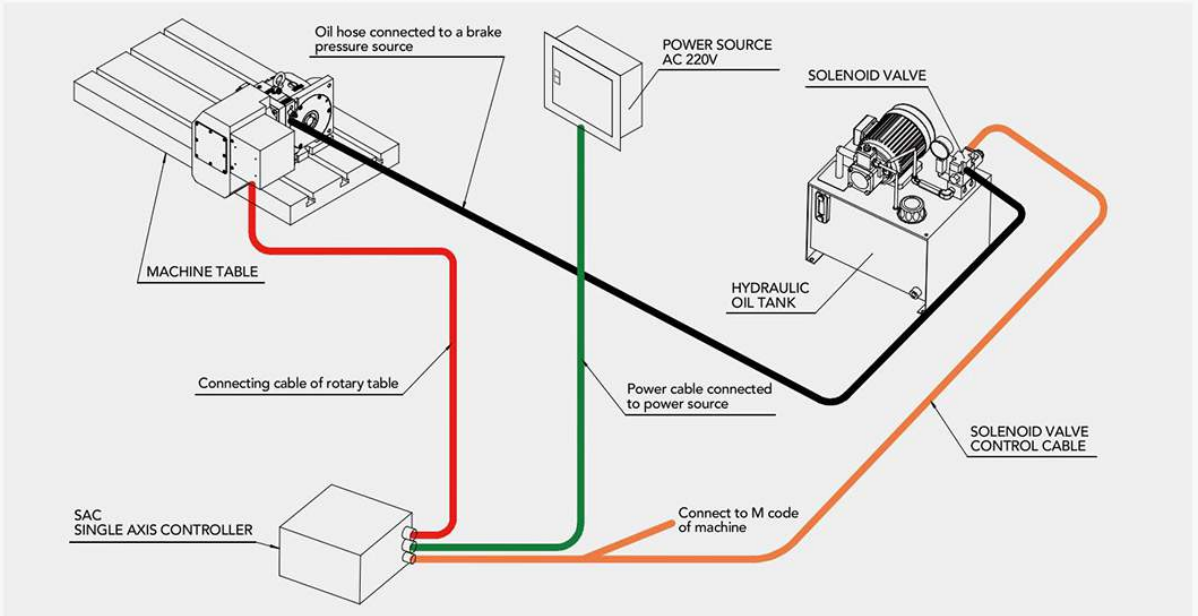


## ROTARY TABLE INSTALLED ON A 5-AXIS MACHINE

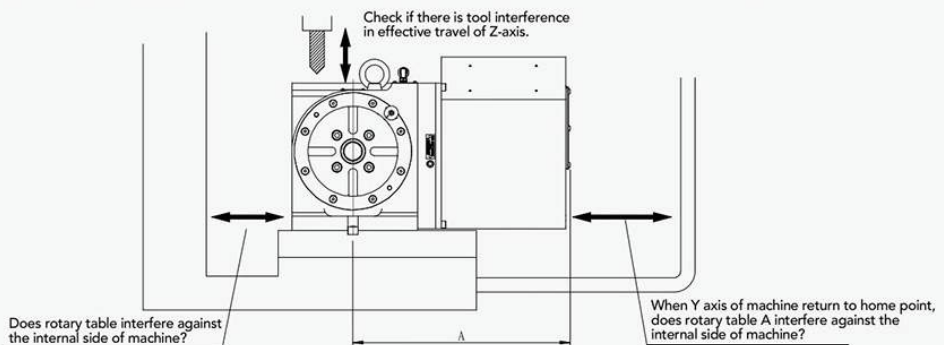


## FIGURE OF ROTARY TABLE AND SAC SINGLE AXIS CONTROLLER CONNECTING TO MACHINE TOOL

- FEATURES:** 1. Not restricted by the brand of control system of a machine.  
2. Online control is available only a M code is required on a machine tool.



## INTERFERENCE BETWEEN ROTARY TABLE AND MACHINE TOOL

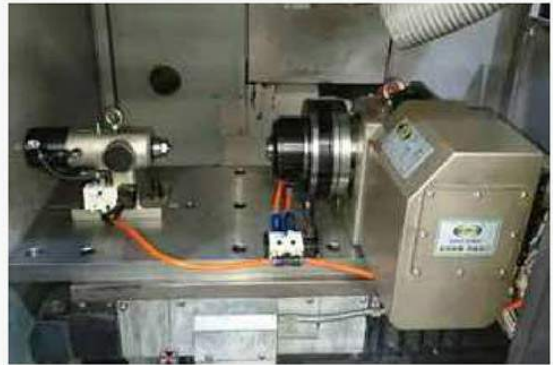


# HSU PEN ROTARY TABLES USED ON VARIOUS RENOWNED MACHINE TOOLS

**SUA-170 + SUARC-170**



**SUA-125 + SUTT-125S**



**SUH-255 + SUHR-255**



**SUH-320 + SUTT-320**



**SUH-320 + SUTTA-320**



**SUH-500 + SUHR-500**



**SUH-400 + SUHR-400**



**SUH-500 + SUHR-400**



# HSU PEN CNC Rotary Tables

have been used by a number of stock listed machine tool manufacturers in China and Taiwan.



Helical machining on pneumatic parts



The middle plate on the hydraulic jig is used for machining a triangular bracket of automotive.



Machining of throw-away type helical cutterhead



**HSU PEN**

**HSU PEN** International Precision Machinery Co., Ltd.

NO. 351, Fu Yang Rd., Feng Yuan Dist., Taichung City 42078, Taiwan



TEL +886-4-2522-5378  
FAX +886-4-2523-5098  
E-mail [hsupen@ms14.hinet.net](mailto:hsupen@ms14.hinet.net)  
[www.hsupen.com.tw](http://www.hsupen.com.tw)

**SERVICE HOTLINES**  
TEL +86-21-67669385  
FAX +86-21-67669387

**SOUTHWEST AREA**  
TEL +86-28-81447898