



GOLDEN SUN[®]

GOLDEN SUN



ISO 9001



GOLDEN SUN®

ISO 9001



ISO 9001
Assurance



Symbol of excellence
WINNER



Patent paper



Dragon award



CE mark



MCS Certificate

COMPANY PREFACE

- Golden Sun Industrial Co., Ltd. established in 1978, from time to time, our growing of devotion work stable, keeping in mind of honesty, faith, profession and innovation, non-stop communication and promotion of critical quality procedure, ensure every products could meet high quality of duration and precision.
- Further we display our products at IMTS-Chicago, EMO-Hannover, JIMTOF-Osaka and TIMTOS-Taipei, and receiving reputation from the customer of the worldwide.
- To meet the request of customer, both upgrading the quality of our produces and purchasing new machinery of testing and inspection, collecting update technology to develop value-added products.
- The sales & service had been built around the network of worldwide, technical supporting and customer service are connected through our agents and dealers more than 30 countries of the world.
- We stay improving and innovating our products as the goal of never ending story, the satisfied of our customer and continuing devotion of our products are what we working for the mutual benefits of our customers and members of GOLDEN SUN.



GOLDEN SUN management system integrated honesty, trust, profession, faith, innovation and creation for the members of GOLDEN SUN.

COMPANY PROFILE

- 1978** Company established, started product of Precision-Index-Tables
- 1980** Professional manufacturer of Precision-Feed-Index-Tables
- 1985** Cooperated with venders in Switzerland, Germany, Japan & USA
- 1988** Products No. 1 awarded MCS (Mechanical Components Standards)
Professional manufacturer of CNC-Rotary-Table
- 1990** Built a new Factory 4,290m² of production-line 1,500m²
Phase-in products A/M-Pallet-Changer, CNC-Tilting-Rotary-Table
- 1991** Products win the "Golden Dragon Award" of Quality & Design
- 1992** Organized and set up branch office in Shanghai, China
- 1994** Products awarded "Symbol of Excellence winner"
- 1995** Complete the EC Declaration of Conformity and affix CE Mark
- 1996** Certificate approved of ISO-9001 by TÜV Rheinland, Germany
Products awarded again the "Symbol of Excellence winner"
- 1997** Release new series of Tool-Turret for CNC Lathe
- 1999** Ready to again Y2K and carry out ERP in whole factory
- 2000** Complete second factory building
- 2001** Complete development of servo turret product lines





GOLDEN SUN[®]



PRODUCTION CONTROL & MANAGEMENT

- ◇ Planned production-quick delivery
- ◇ Standardize components-exchangeable parts.
- ◇ Procedure-quality assurance



AFTER-SALES MANAGEMENT

Excellent & fastest after-sales service.

MARKETING & SALES MANAGEMENT

Global sales network

- ◇ Domestic : agents-North, Middle, West, area.
- ◇ Oversea : Agents & dealers extend all over 40 areas of the world.





Q. C. SYSTEM

Certificate approved of ISO 9001 to suit international standard from design / research to after sell service.



GUIDE IN ERP SYSTEM

Guide in ERP system to record & unify whole company resource for effective management.



RESEARCH NEW IDEA DESING

To increase work efficiency, R & D Dept, keeping update technology & using CAD system.

To Match Our Products with Machine Tools	P.1
CNC Rotary Table	
◊ Standard Type	P.3
Model : CNC-101R, CNC-151R, CNC-201R, CNC-251R, CNC-321R, CNC-321RV, CNC-401RV, CNC-501RV, CNC-631RV, CNC-801RV	
◊ Back Mounted Motor Type	P.7
Model : CNC-151RB, CNC-201RB, CNC-251RB	
◊ Large Thru-Hole Type	P.9
Model : CNCB-251R, CNCB-321R, CNCB-401RV, CNCB-501RV, CNCB-631RV, CNCB-801RV	
◊ Multi-Spindle Type	P.11
Model : CNC-201-3W	
CNC Tilting Rotary Table	P.12
Model : CNCT-202, CNCT-321, CNCT-451, CNCT-631	
CNC Manual Tilting Rotary Table	P.14
Model : CNCMT-201, CNCMT-321, CNCMT-401	
NC Face Gear Indexer	P.16
Model : NCF-250, NCF-400	
CNC Face Gear Indexer/horizontal	P.17
Model : HT-630, HT-800, HT-1000	
Controller	
◊ DC Servo Controller	P.19
Model : V-35	
◊ Stepping Controller	P.21
Model : SUPERII	
◊ AC Servo Controller	P.22
Model : G MATE A,B,C	
Manual Taistock	P.23
Model : TSA-101, TSA-530, TSA-530A, TSA-728, TSA-728A, TSA-825, TSA-984, TSA-984A, TSA-984B, TSA-1220, TSA-1575, TSA-1890, TSA-251S	

INDEX

Precision Index Table	P.24
Model : GCT-300, GCT-450, GCT-600, GCT-700, GCT-800, GCT-1000, GCT-1200, GCT-1400, GCT-1800	
Precision Feed Index Table	
Model : AD-220, AD-340, AD-470, AD-600, AD-800	P.26
Index-Mate	P.28
Hirth Coupling	P.29
2pcs / 3pcs hirth coupling	
Optional Accessories	P.32
Application of Products	P.33

CNC Vertical Machining



CNC Horizontal Machining



Round-Type Special-Purpose Machine



CNC Rotary table

{ Example of workpieces }



Standard Type
Model : CNC-101R-801RV
Page : 3



Large Thru-Hole Type
Model : CNCB-251R-801RV
Page : 9



Back Mounted Motor Type
Model : CNC-151RB-251RB
Page : 7



Multi-Spindle Type
Model : CNC-201-3W
Page : 11



CNC Tilting Rotary Table

{ Example of workpieces }



Model : CNCT-202-631
Page : 12



CNC Manual Tilting Rotary Table

{ Example of workpieces }



Model : CNCMT-321-401
Page : 14

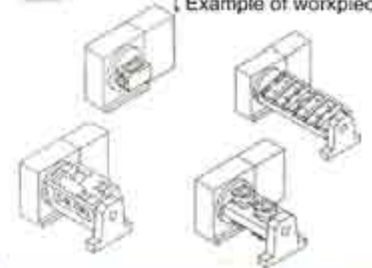


NC Face Gear Indexer

Model : NCF-250-400
Page : 16



{ Example of workpieces }



Precision Index Table

Model : GCT-300-1800
Page : 24



{ Example of workpieces }



Precision Feed Index Table

Model : AD-220-800
Page : 26



{ Example of workpieces }



Horizontal Boring Machine



Vertical Milling Machine



CNC Face Gear Indexer/Horizontal



Model : HT-630, HT-800, HT-1000
Page : 17

Hirth Coupling



2pcs / 3pcs
Page : 29

AC/DC/Stepping servo controller+ CNC Rotary Table



Model : G Mate



Model : Super II

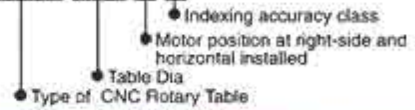







Model : V-35



- ◆ A combination of high precision bronze / nickel worm wheel and case hardened steel worm screw ensures long term indexing accuracy.
- ◆ Multi-Points pneumatic brake system offers superior clamp torque, insures smooth machining without deflection under a heavy load.
- ◆ Whatever interfaces as a true 4th for both continuing and positioning machining or a M-code Indexer for positioning machining.

MODEL NO : **CNC -251 R A**

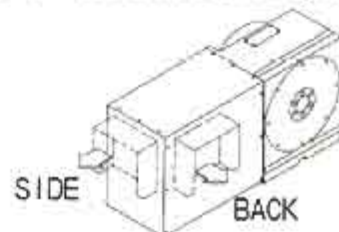


ITEM / MODEL	CNC-101R	CNC-151R	CNC-201R	CNC-251R	CNC-321R	
Table Dia (mm/inch)	120 / 4.72	150 / 5.9	200 / 7.87	250 / 9.84	320 / 12.60	
Center Height in Vertical (mm / inch)	115 / 4.53	135 / 5.31	135 / 5.31	185 / 7.28	210 / 8.27	
Table Height in Horizontal (mm / inch)	170 / 6.69	165 / 6.5	165 / 6.5	200 / 7.87	240 / 9.45	
Over all Height in Vertical Without Motor Cover (mm / inch)	193 / 7.60	240 / 9.45	240 / 9.45	315 / 12.4	380 / 14.96	
Thru-Hole Dia (mm / inch)	30 ^{mm} / 1.18 ⁱⁿ	35 ^{mm} / 1.37 ⁱⁿ	35 ^{mm} / 1.37 ⁱⁿ	52 ^{mm} / 2.05 ⁱⁿ	105 ^{mm} / 4.13 ⁱⁿ	
Width of T-slot (mm / inch)	10 ^{mm} / 0.39 ⁱⁿ	12 ^{mm} / 0.47 ⁱⁿ	12 ^{mm} / 0.47 ⁱⁿ	12 ^{mm} / 0.47 ⁱⁿ	14 ^{mm} / 0.55 ⁱⁿ	
Width of Guide Block (mm / inch)	14 ^{mm} / 0.55 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	
Servo motor type	MELDAS	HA-33	HA-40	HA-40	HA-80, 100	
	FANUC	α2	α3	α3	α3	
Gear Ratio	1:90	1:90	1:90	1:180	1:180	
Min. Indexing Unit degree (degree)	0.001°	0.001°	0.001°	0.001°	0.001°	
Max. R.P.M. (rpm) (motor : 2000 / rpm)	22.2	22.2	22.2	11.1	11.1	
Pneu. clamp force (kg•m) (P:5kg / cm ²)	12	25	25	47	71	
Hydro. clamp force (kg•m) (P:20kg / cm ²)	24	50	50	94	142	
Indexing Accuracy Class (sec.)	60"	A 25"	A 25"	A 15"	A 15"	
	60"	S 50"	S 50"	S 30"	S 30"	
Repeatability (sec.)	±3"	±3"	±3"	±2"	±2"	
Max. Machining Force (kg•m)	12	23	23	45	78	
N.W. (kgs)	28	70	84	124	210	
Max. Load	Vertical 	W=35 kg	W=75 kg	W=100 kg	W=125 kg	W=150 kg
	Horizontal 	W=75 kg	W=150 kg	W=200 kg	W=300 kg	W=350 kg
Max. Radial Load		F=600 kg	F=800 kg	F=822 kg	F=1208 kg	F=1375 kg
		FxL=6 kg•m	FxL=11.2 kg•m	FxL=13 kg•m	FxL=18.2 kg•m	FxL=26 kg•m
		FxL=12 kg•m	FxL=40 kg•m	FxL=50 kg•m	FxL=72 kg•m	FxL=92 kg•m
Max. Working Inertia		1.38 kg•cm•sec ²	4.08 kg•cm•sec ²	10.2 kg•cm•sec ²	23.9 kg•cm•sec ²	45.7 kg•cm•sec ²
Spindle Drive Torque		6 kg•m	9 kg•m	9 kg•m	17 kg•m	28 kg•m

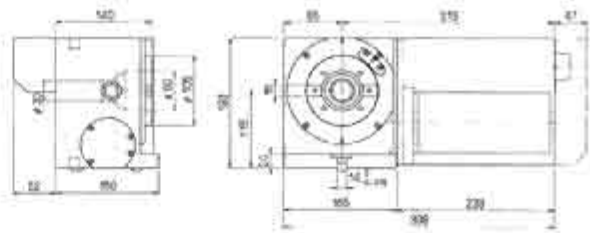
- ◆ Other brand of AC Servo-Motor also could be installed, but outline dimension of motor is required and necessary Refer to P : 32 Chart 4
- ◆ Up & backside cable outlet is available, slant motor cover also available
- ◆ Standard accessory : eye bolts, clamping blocks

◆ Outlet of wire box could be decided by customers order

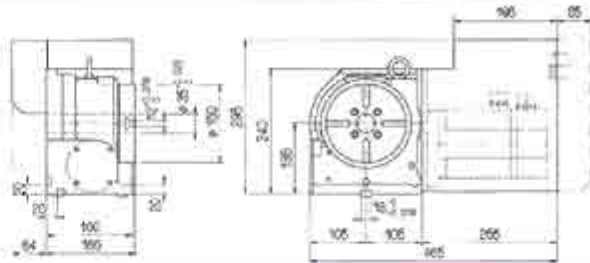
- ◆ To match AC-/DC-/Stepping-Controller → Refer to P : 21
- ◆ Adapting Tailstock → Refer to P : 23
- ◆ Optional accessories → Refer to P : 31



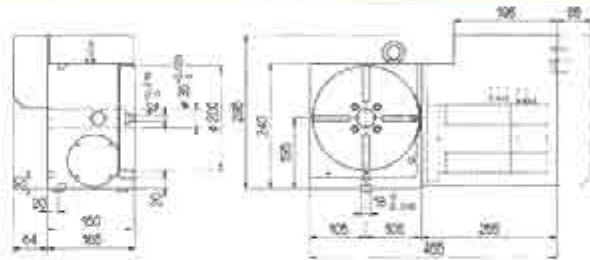
CNC-101R



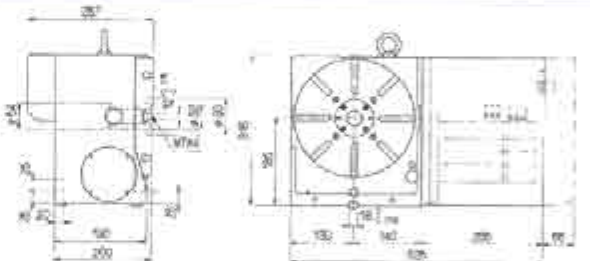
CNC-151R



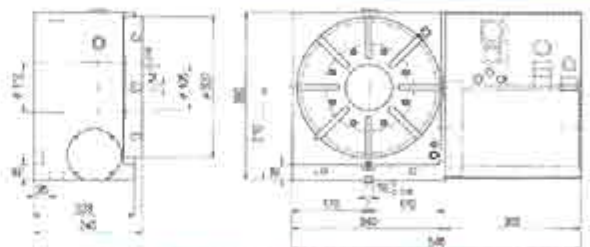
CNC-201R



CNC-251R



CNC-321R



NOTE : Difference motor becomes difference length of motor cover

Accuracy Standards




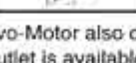
Unit:mm


ITEM	Table top flatness	Parallelism of table top and frame bottom	Runout of table spindle center	Perpendicularity of table top to frame bottom	Table top runout	Perpendicularity of table top to frame bottom guide block	Parallelism of center line between headstock & tailstock to frame bottom guide block
MODEL							
CNC-101R	0.01	0.01	0.015	0.012	0.01	0.02	0.02
CNC-151R	0.01	0.01	0.01	0.02	0.015	0.02	0.02
CNC-201R	0.01	0.01	0.01	0.02	0.015	0.02	0.02
CNC-251R	0.01	0.01	0.01	0.02	0.015	0.02	0.02
CNC-321R	0.01	0.01	0.01	0.02	0.015	0.02	0.02



MODEL NO : CNC-401 RV A

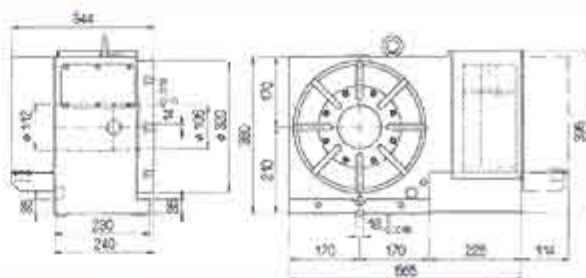
- Indexing accuracy class
- Motor position
Right-side and vertical installed.
- Table Dia.
- Type of CNC Rotary Table

ITEM / MODEL		CNC-321RV	CNC-401RV	CNC-501RV	CNC-631RV	CNC-801RV	
Table Dia (mm / inch)		320 / 12.6	400 / 15.75	500 / 19.69	630 / 24.8	800 / 31.5	
Center Height in Vertical (mm / inch)		210 / 8.27	250 / 9.84	310 / 12.20	400 / 15.75	480 / 18.90	
Table Height in Horizontal (mm / inch)		240 / 9.45	250 / 9.84	290 / 11.42	320 / 12.60	340 / 13.39	
Over all Height in Vertical Without Motor Cover (mm / inch)		395 / 15.55	460 / 18.11	570 / 22.44	725 / 28.54	880 / 34.65	
Thru-Hole Dia (mm / inch)		105 ^{mm} / 4.13 ⁱⁿ	80 ^{mm} / 3.15 ⁱⁿ	130 ^{mm} / 5.12 ⁱⁿ	130 ^{mm} / 5.12 ⁱⁿ	130 ^{mm} / 5.12 ⁱⁿ	
Width of T-slot (mm / inch)		14 ^{mm} / 0.55 ⁱⁿ	14 ^{mm} / 0.55 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	20 ^{mm} / 0.79 ⁱⁿ	
Width of Guide Block (mm / inch)		18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	22 ^{mm} / 0.87 ⁱⁿ	
Servo motor type	MELDAS	HA-100	HA-100	HA-100	HA-200	HA-200	
	FANUC	α 12	α 12	α 12	α 22	α 22	
Gear Ratio		1:180	1:180	1:180	1:180	1:180	
Min. Indexing (degree)		0.001°	0.001°	0.001°	0.001°	0.001°	
Max. R.P.M. (rpm) (motor : 2000 / rpm)		11.1	11.1	11.1	11.1	11.1	
Pneu. clamp force (kg ^m) (P:5kg / cm ²)		71	92	125	350	370	
Hydro. clamp force (kg ^m) (P:20kg / cm ²)		142	184	250	700	740	
Indexing Accuracy Class (sec.)		A	15"	A	15"	A	15"
		S	30"	S	30"	S	30"
Repeatability (sec.)		±2"	±2"	±2"	±2"	±2"	
Max. Machining Force (kg ^m)		78	160	230	320	350	
N.W. (kgs)		210	280	380	860	1200	
Max. Load	Vertical 	W=150 kg	W=300 kg	W=350 kg	W=400 kg	W=500 kg	
	Horizontal 	W=350 kg	W=500 kg	W=600 kg	W=800 kg	W=1000 kg	
Max. Radial Load		F=1375 kg	F=1585 kg	F=1880 kg	F=2080 kg	F=2080 kg	
		FxL=26 kg ^m	FxL=36 kg ^m	FxL=89 kg ^m	FxL=185 kg ^m	FxL=185 kg ^m	
		FxL=92 kg ^m	FxL=122 kg ^m	FxL=165 kg ^m	FxL=228 kg ^m	FxL=228 kg ^m	
Max. Working Inertia		45.7 kg ^{cm} ·sec ²	102 kg ^{cm} ·sec ²	191 kg ^{cm} ·sec ²	405 kg ^{cm} ·sec ²	816 kg ^{cm} ·sec ²	
Spindle Drive Torque		28 kg ^m	40 kg ^m	59 kg ^m	124 kg ^m	124 kg ^m	

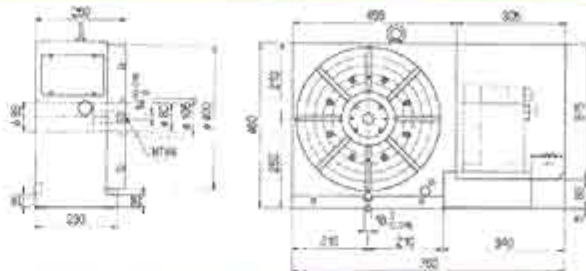
- ◆ Other brand of AC Servo-Motor also could be installed, but outline dimension of motor is required and necessary  Refer to P : 32 Chart 4
- ◆ Up & backside cable outlet is available, slant motor cover also available
- ◆ Standard accessory : eye bolts, clamping blocks

- ◆ To match AC-/DC-/Stepping-Controller → Refer to P : 21
- ◆ Adapting Tailstock → Refer to P : 23
- ◆ Optional accessories → Refer to P : 31

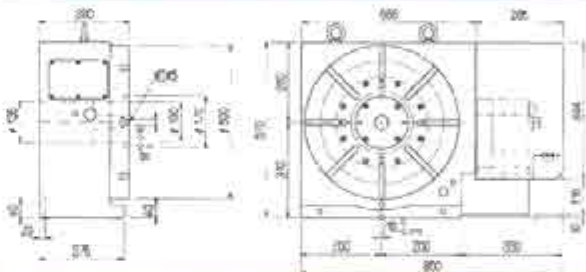
CNC-321RV



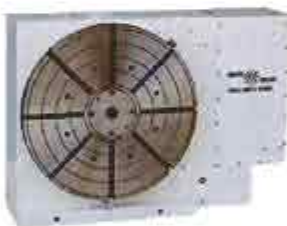
CNC-401RV



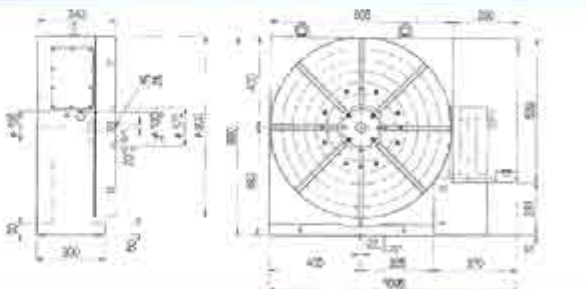
CNC-501RV



CNC-631RV



CNC-801RV



Accuracy Standards

Unit:mm

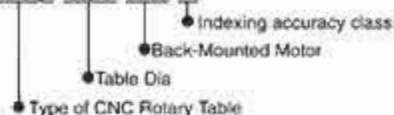
ITEM	Table top flatness	Parallelism of table top and frame bottom	Runout of table spindle center	Perpendicularity of table top to frame bottom	Table top runout	Perpendicularity of table top to frame bottom guide block	Parallelism of center line between headstock & tailstock to frame bottom guide block
CNC-321RV	0.01	0.01	0.01	0.02	0.015	0.02	0.02
CNC-401RV	0.015	0.015	0.01	0.02	0.015	0.02	0.02
CNC-501RV	0.015	0.015	0.01	0.02	0.015	0.02	0.02
CNC-631RV	0.025	0.025	0.01	0.025	0.02	0.02	0.02
CNC-801RV	0.025	0.025	0.01	0.025	0.02	0.02	0.02











- ◆ Back-Mounted Motor, avoid the interference with M/C splash guard.
- ◆ Suitable for small-size of CNC Machining / Tapping-Center.

※This model can not be installed for horizontal use※

MODEL NO : **CNC-151 RB A**

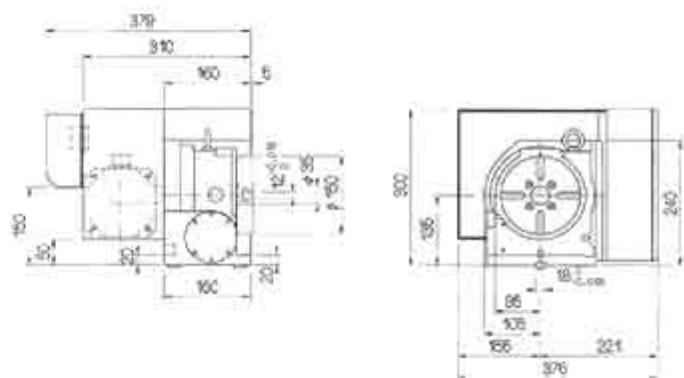


ITEM / MODEL		CNC-151RB	CNC-201RB	CNC-251RB
Table Dia (mm / inch)		150 / 5.91	200 / 7.87	250 / 9.84
Center Height in Vertical (mm / inch)		135 / 5.31	135 / 5.31	185 / 7.28
Over all Height in Vertical (mm / inch)		300 / 11.81	300 / 11.81	365 / 14.37
Thru-Hole Dia (mm / inch)		35 ^{mm} / 1.38 ⁱⁿ	35 ^{mm} / 1.38 ⁱⁿ	52 ^{mm} / 2.05 ⁱⁿ
Width of T-slot (mm / inch)		12 ^{mm} / 0.47 ⁱⁿ	12 ^{mm} / 0.47 ⁱⁿ	12 ^{mm} / 0.47 ⁱⁿ
Width of Guide Block (mm / inch)		18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ
Servo motor type	MELDAS	HA-40	HA-40	HA-40
	FANUC	$\alpha 3$	$\alpha 3$	$\alpha 3$
Gear Ratio		1:90	1:90	1:180
Min. Indexing (degree)		0.001°	0.001°	0.001
Max. R.P.M. (rpm) (motor : 2000 / rpm)		22.2	22.2	11.1
Pneu. clamp force (kg \cdot m) (P:5kg / cm ²)		25	25	47
Hydro. clamp force (kg \cdot m) (P:20kg / cm ²)		50	50	94
Indexing Accuracy Class (sec.)	A	25 ^{sec}	A	25 ^{sec}
	S	50 ^{sec}	S	50 ^{sec}
Repeatability (sec.)		$\pm 3^{\circ}$	$\pm 3^{\circ}$	$\pm 3^{\circ}$
Max. Machining Force (kg \cdot m)		23	23	45
N. W. (kgs)		70	84	124
Max. Load	Vertical 	W=75 kg	W=100 kg	W=125 kg
	Horizontal 	W=150 kg	W=200 kg	W=300 kg
Max. Radial Load		F=800 kg	F=822 kg	F=1208 kg
		FxL=11.2 kg \cdot m	FxL=13 kg \cdot m	FxL=18.2 kg \cdot m
		FxL=40 kg \cdot m	FxL=50 kg \cdot m	FxL=72 kg \cdot m
Max. Working Inertia		4.08 kg \cdot cm ² sec ²	10.2 kg \cdot cm ² sec ²	23.9 kg \cdot cm ² sec ²
Spindle Drive Torque		9 kg \cdot m	9 kg \cdot m	17 kg \cdot m

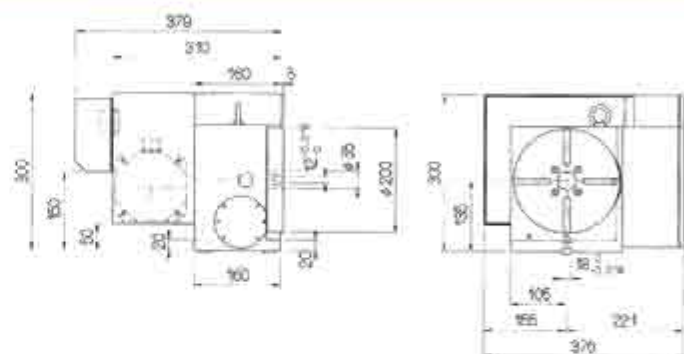
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- ◆ To match AC-/DC-/Stepping-Controller → Refer to P : 21
- ◆ Adapting Tailstock → Refer to P : 23
- ◆ Optional accessories → Refer to P : 31

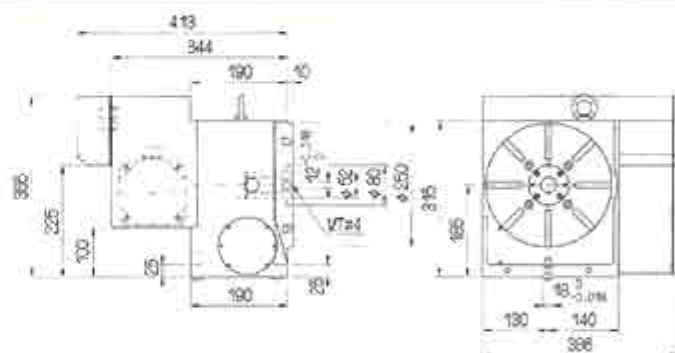
CNC-151RB



CNC-201RB



CNC-251RB



Accuracy Standards

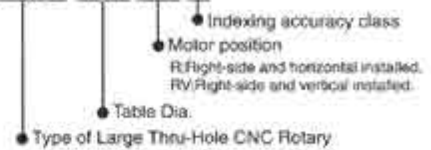
Unit:mm


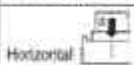





ITEM	Table top flatness	Parallelism of table top and frame bottom	Runout of table spindle center	Perpendicularity of table top to frame bottom	Table top runout	Perpendicularity of table top to frame bottom guide block	Parallelism of center line between headstock & tailstock to frame bottom guide block
CNC-151RB	0.01	0.01	0.01	0.02	0.015	0.02	0.02
CNC-201RB	0.01	0.01	0.01	0.02	0.015	0.02	0.02
CNC-251RB	0.01	0.01	0.01	0.02	0.015	0.02	0.02




- ◆ Enlarged main spindle center diameter for machining longer workpieces or pipes.

MODEL NO : CNCB-401 RV A



ITEM / MODEL		CNCB-251R	CNCB-321R	CNCB-401RV	CNCB-501RV	CNCB-631RV	CNCB-801RV
Table Dia (mm / inch)		250 / 9.84	320 / 12.60	400 / 15.75	500 / 19.69	630 / 24.80	800 / 31.50
Center Height in Vertical (mm / inch)		185 / 7.28	210 / 8.27	250 / 9.84	310 / 12.20	400 / 12.20	480 / 18.90
Table Height in Horizontal (mm / inch)		200 / 7.87	240 / 9.45	250 / 9.84	290 / 11.42	320 / 12.60	340 / 13.39
Over all Height in Vertical Without Motor Cover (mm / inch)		315 / 12.40	380 / 14.96	460 / 18.11	570 / 22.44	725 / 28.54	880 / 34.65
Thru-Hole Dia (mm / inch)		70 / 3.15	110 / 4.33	150 ^{mm} / 5.91 ⁱⁿ	180 ^{mm} / 7.09 ⁱⁿ	254 ^{mm} / 10 ⁱⁿ	254 ^{mm} / 10 ⁱⁿ
Width of T-slot (mm / inch)		12 ^{mm} / 0.47 ⁱⁿ	14 ^{mm} / 0.55 ⁱⁿ	14 ^{mm} / 0.55 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	22 ^{mm} / 0.87 ⁱⁿ
Width of Guide Block (mm / inch)		18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	18 ^{mm} / 0.71 ⁱⁿ	20 ^{mm} / 0.79 ⁱⁿ
Servo motor type	MELDAS	HA-40	HA-100	HA-100	HA-100	HA-200	HA-200
	FANUC	α 3	α 12	α 12	α 12	α 22	α 22
Gear Ratio		1:180	1:180	1:180	1:180	1:180	1:180
Min. indexing (degree)		0.001°	0.001°	0.001°	0.001°	0.001°	0.001°
Max. R.P.M. (rpm) (motor : 2000 / rpm)		11.1	11.1	11.1	11.1	11.1	11.1
Pneu. clamp force (kg \cdot m) (P:5kg / cm ²)		47	71	92	125	350	370
Hydro. clamp force (kg \cdot m) (P:20kg / cm ²)		94	142	184	250	700	740
Indexing Accuracy Class (sec.)		A 15"	A 15"	A 15"	A 15"	A 15"	A 15"
		S 30"	S 30"	S 30"	S 30"	S 30"	S 30"
Repeatability (sec.)		\pm 2"	\pm 2"	\pm 2"	\pm 2"	\pm 2"	\pm 2"
Max. Machining Force (kg \cdot m)		45	78	160	230	330	350
N. W. (kgs)		124	210	280	380	860	1200
Max. Load	Vertical 	W=125 kg	W=150 kg	W=300 kg	W=350 kg	W=400 kg	W=500 kg
	Horizontal 	W=300 kg	W=350 kg	W=500 kg	W=600 kg	W=800 kg	W=1000 kg
Max. Radial Load		F=1208 kg	F=1375 kg	F=1585 kg	F=1880 kg	F=2080 kg	F=2080 kg
		FxL=18.2 kg \cdot m	FxL=26 kg \cdot m	FxL=36 kg \cdot m	FxL=89 kg \cdot m	FxL=185 kg \cdot m	FxL=185 kg \cdot m
		FxL=72 kg \cdot m	FxL=92 kg \cdot m	FxL=122 kg \cdot m	FxL=165 kg \cdot m	FxL=228 kg \cdot m	FxL=228 kg \cdot m
Max. Working Inertia		23.9 kg \cdot cm \cdot sec ²	45.7 kg \cdot cm \cdot sec ²	102 kg \cdot cm \cdot sec ²	191 kg \cdot cm \cdot sec ²	405 kg \cdot cm \cdot sec ²	816 kg \cdot cm \cdot sec ²
Spindle Drive Torque		17 kg \cdot m	28 kg \cdot m	40 kg \cdot m	59 kg \cdot m	124 kg \cdot m	124 kg \cdot m

◆ Other brand of AC Servo-Motor also could be installed, but outline dimension of motor is required and necessary  Refer to P : 32 Chart 4

◆ Up & backside cable outlet is available, slant motor cover also available

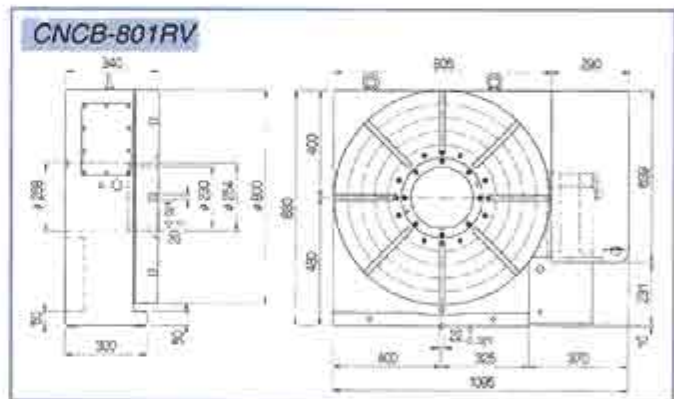
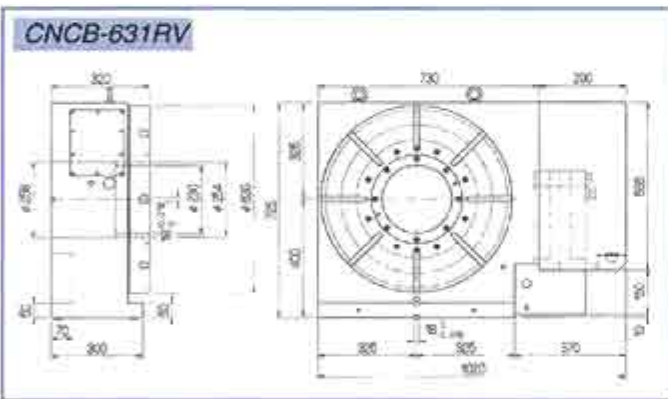
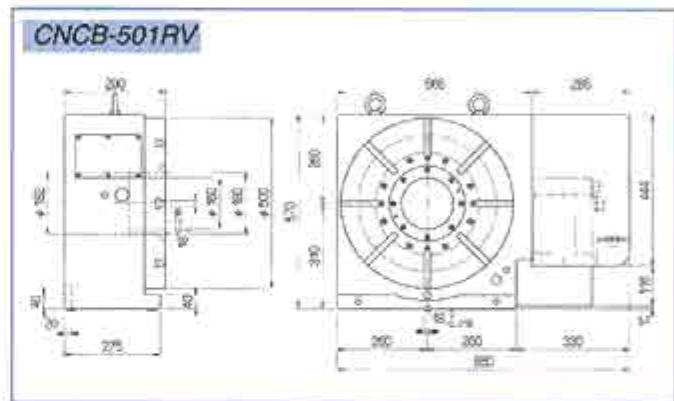
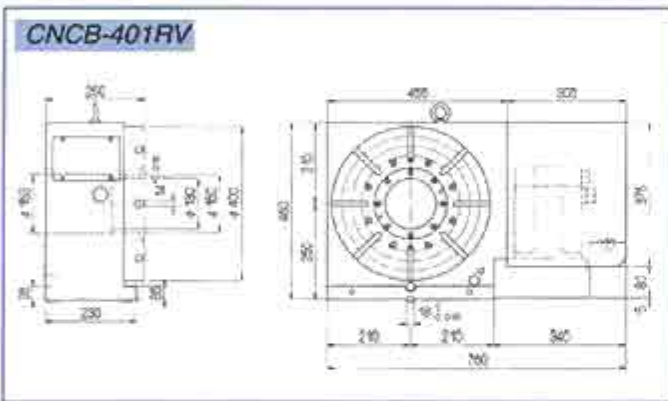
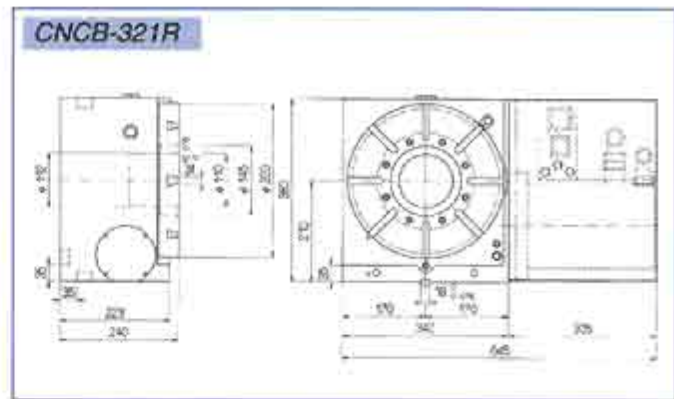
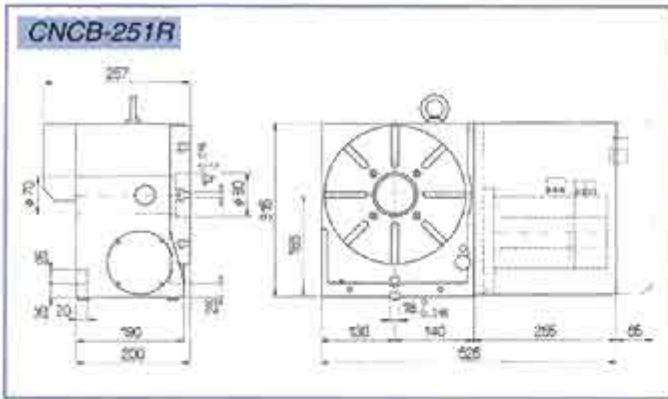
◆ Standard accessory: eye bolts, clamping blocks

• To match AC-/DC-/Stepping-Controller → Refer to P : 21

• Adapting Tailstock → Refer to P : 23

• Optional accessories → Refer to P : 31

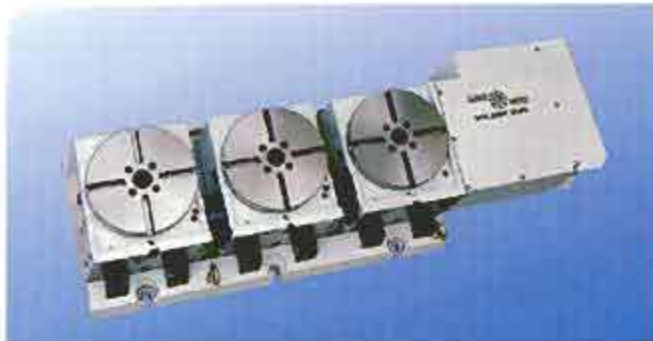
DIMENSION



Accuracy Standards

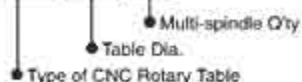
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



ITEM	Table top flatness	Parallelism of table top and frame bottom	Runout of table spindle center	Perpendicularity of table top to frame bottom	Table top runout	Perpendicularity of table top to frame bottom guide block	Parallelism of center line between headstock & tailstock to frame bottom guide block
CNCB-251R	0.01	0.01	0.01	0.02	0.015	0.02	0.02
CNCB-321R	0.01	0.01	0.01	0.02	0.015	0.02	0.02
CNCB-401RV	0.01	0.01	0.01	0.02	0.015	0.02	0.02
CNCB-501RV	0.01	0.01	0.01	0.02	0.015	0.02	0.02
CNCB-631RV	0.01	0.01	0.01	0.02	0.015	0.02	0.02
CNCB-801RV	0.01	0.02	0.01	0.02	0.015	0.02	0.02






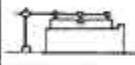
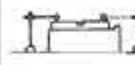

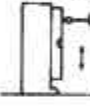
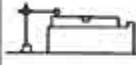
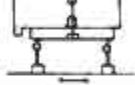
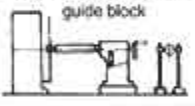
- ◆ Double productivity, decreasing machining-time and cost.
- ◆ Multi-Points pneumatic brake system offers superior clamp torque, insures smooth machining without deflection under a heavy load.
- ◆ Increasing machining speed, reduce the time on rotating ATC and workpiece loading-unloading


MODEL NO : **CNC-201-3W**



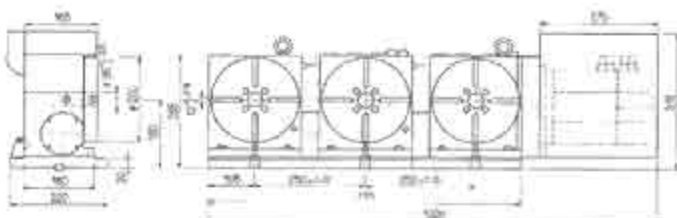
ITEM / MODEL		CNC-201-3W(2W)
Table Dia (mm / inch)		200 / 7.87
Center Height in Vertical (mm / inch)		160 / 6.30
Table Height in Horizontal (mm / inch)		190 / 7.48
Over all Height in Vertical Without Motor Cover (mm / inch)		315 / 12.40
Thru-Hole Dia (mm / inch)		35 ^{mm} / 1.38 ⁱⁿ
Width of T-slot (mm / inch)		12 ^{mm} / 0.47 ⁱⁿ
Width of Guide Block (mm / inch)		18 ^{mm} / 0.71 ⁱⁿ
Servo motor type	MELDAS	HA-80
	FANUC	$\alpha 6$
Max. Load	Vertical 	W=100 kg
	Horizontal 	W=200 kg
Max. Working Inertia		10.2 kg \cdot cm \cdot sec 2
Spindle Drive Torque		4.0 kg \cdot m

ITEM / MODEL		CNC-201-3W
Gear Ratio		90:1
Min. Increment (drgree)		0.001 $^\circ$
Max. R.P.M. (rpm) (motor : 2000 / rpm)		22.2
Pneu. clamp force (kg \cdot m) (P:5kg / cm 2)		25
Hydro. clamp force (kg \cdot m) (P:20kg / cm 2)		50
Indexing Accuracy Class (sec.)		60 $^\circ$
Repeatability (sec.)		± 5 $^\circ$
Max. Machine Force (kg \cdot m)		23
N.W. (kgs)		270
Max. Radial Load		W=822 kg
		FxL=13 kg \cdot m
		FxL=13 kg \cdot m

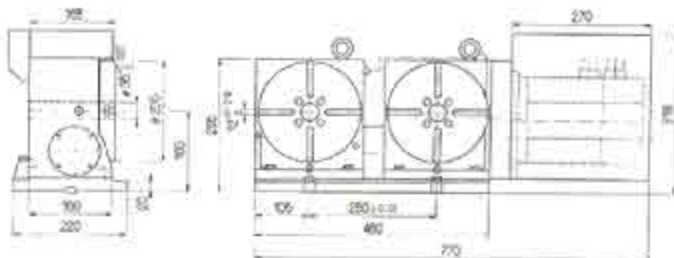
Accuracy Standards								Unit:mm
ITEM	Table top flatness	Parallelism of table top and frame bottom	Runout of table spindle center	Perpendicularity of table top to frame bottom	Table top runout	Perpendicularity of table top to frame bottom guide block	Parallelism of center line between headstock & tailstock to frame bottom guide block	
MODEL								
CNC-201-3W	0.01	0.02	0.01	0.012	0.015	0.02	0.02	

- ◆ Other brand of AC Servo-Motor also could be installed, but outline dimension of motor is required and necessary  Refer to P : 32 Chart 4
- ◆ Standard accessory: eye bolts, clamping blocks

CNC-201-3W



CNC-201-2W













- ◆ Easy Installation Easy Operation.
- ◆ Compact Design Wide Machining Range.
- ◆ Even Approx. One Meter Table M/C Could be Installed.
- ◆ To match 5 axes M/C for continuing machining, the tilting axis could be connected the M-code by using our single axis AC/DC/Stepping servo controller.

MODEL NO : CNCT-321

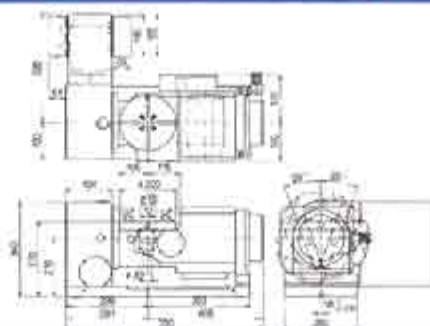
- Table Dia.
- Type of CNC Tilting Rotary Table

ITEM / MODEL		CNCT-202		CNCT-321		CNCT-451		CNCT-631	
Table Dia (mm)		200		320		450		630	
Table center Height in Vertical (mm)		210		255		360		480	
Over all Height in Vertical (mm)		340		440		570		805	
Thru-Hole Dia (mm)		30"		105"		150"		254"	
Width of T-slot (mm)		12"		14"		14"		18"	
Width of Guide Block (mm)		18"		18"		18"		18"	
Servo motor type	MELDAS	Rotating HA-40	Tilting HA-80	Rotating HA-80	Tilting HA-100	Rotating HA-100	Tilting HA-100	Rotating HA-100	Tilting HA-200
	FANUC	$\alpha 3$	$\alpha 6$	$\alpha 6$	$\alpha 12$	$\alpha 12$	$\alpha 12$	$\alpha 22$	$\alpha 22$
Gear Ratio		1:90	1:180	1:180	1:180	1:180	1:180	1:180	1:180
Min. Increment(degree)		0.001°	0.001°	0.001°	0.001°	0.001°	0.001°	0.001°	0.001°
Max. R.P.M. (rpm) (motor : 2000 / rpm)		22.2	11.1	11.1	11.1	11.1	11.1	11.1	11.1
Load capacity (Tilting axis)	0° (kg)	100		150		250		400	
	90° (kg)	50		80		150		200	
	Max. Machining Force (kg·m)	18		25		30		100	
Tilting degree		-110°~100°		-15°~115°		-15°~105°		-15°~115°	
Rotation axis	Pneu. clamp force(kg·m)(P.5kg / cm ²)	-		71		92		350	
	Hydro. clamp force(kg·m)(P.20kg/cm ²)	50		142		184		700	
	Indexing Accuracy (sec.)	25°		15°		15°		15°	
	Repeatability (sec.)	4°		4°		4°		4°	
Tilting axis	Pneumatic /hydraulic clamping force (kg·m)	-/ 85		96/ 167		117/ 209		375/ 725	
	Indexing Accuracy (sec.)	50°		30°		30°		30°	
N.W. (kgs)		240		612		990		1800	
Max. Load	Vertical 	W=50 kg		W=100 kg		W=150 kg		W=300 kg	
	Horizontal 	W=100 kg		W=200 kg		W=300 kg		W=500 kg	
Max. Radial Load		F=500 kg		F=1500 kg		F=2500 kg		F=3200 kg	
		FxL=16.5 kg·m		FxL=37.5 kg·m		FxL=60 kg·m		FxL=260 kg·m	
		FxL=15 kg·m		FxL=35 kg·m		FxL=50 kg·m		FxL=29 kg·m	
Max. Working Inertia		5 kg·cm·sec ²		26 kg·cm·sec ²		43 kg·cm·sec ²		253 kg·cm·sec ²	
Spindle Drive Torque		6.5 kg·m		27 kg·m		54 kg·m		103 kg·m	

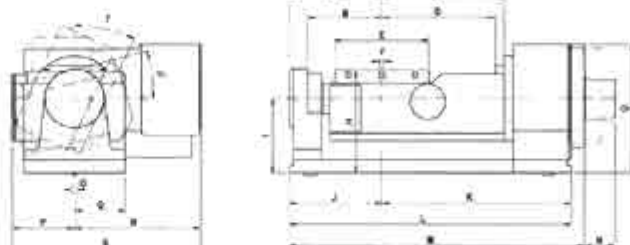
- ◆ Other brand of AC Servo-Motor also could be installed, but outline dimension of motor is required and necessary.  Refer to P : 32 Chart 4
- ◆ Standard accessory: eye bolts, clamping blocks
- ◆ Could be increased tilting angle ±180°

- ◆ To match AC/DC/Stepping-Controller→ Refer to P : 21
- ◆ Adapting Tailstock→ Refer to P : 23

CNCT-202



CNCT-321 - CNCT-631



MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
CNCT-321	311	251	415	385	320	14	440	350	255	313	644	957	1002	102	18	210	170	425	635	25°	25°
CNCT-451	358	296	510	470	450	14	670	510	360	343	750	1093	1138	67	18	250	210	550	800	15°	15°
CNCT-631	526	436	630	580	630	18	805	645	480	511	940	1451	1496	67	18	355	325	695	1050	25°	15°

Suitable Location on M/C Table

CNCT-202

CNCT-321-631



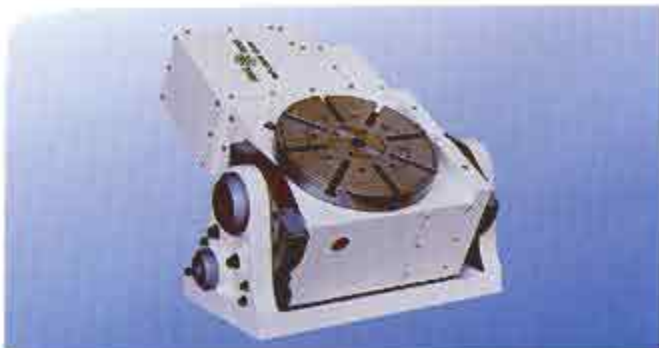
Accuracy Standards

MODEL	ITEM	Unit:mm							
		Table top flatness	Parallelism of table top and frame bottom	Runout of table spindle center	Table top runout	Parallelism of tilting axis center line and frame bottom	Parallelism of table top to frame bottom guide block	An encoder measuring instrument should be used for indexing accuracy measurements (Rotating)	An encoder measuring instrument should be used for indexing accuracy measurements (Tilting)
CNCT-202		0.01	0.02	0.01	0.015	0.02	0.02	25°	50°
CNCT-321		0.01	0.02	0.01	0.015	0.02	0.02	15°	30°
CNCT-451		0.015	0.025	0.01	0.02	0.02	0.02	15°	30°
CNCT-631		0.025	0.025	0.01	0.025	0.02	0.02	15°	30°

HOW to Retrofit CNCT with M/C & Controller

M/C Preparation	Status of M/C	Completed package for CNCT table				FUNCTION	
		CNCT-202	CNCT-321	CNCT-451	CNCT-631		
Standard 3 axes	CNC machine equipped with 3 axes (X, Y, Z) without additional axis	Rotating	V-35, G Mate A	G Mate B	G Mate B	G Mate B	The rotating and tilting axes only for positioning machining purpose and cost efficiency
		Tilting	V-35, G Mate A	G Mate B	G Mate B,C	G Mate C	
Addition 4th axis	CNC machine equipped with an additional 4th axis (X, Y, Z, A)	Rotating	A axis	A axis	A axis	A axis	Tilting axis is prepared for positioning machining and rotating axis is prepared for continuing machining (X, Y, Z, A)
		Tilting	V-35, G Mate A	G Mate B	G Mate C	G Mate C	
Addition 4th 5th axes	CNC machine equipped with an additional 4th and 5th axes (X, Y, Z, A, B)	Rotating	A axis	A axis	A axis	A axis	X · Y · Z · A · B, 5 AXES are prepared for continuing machining
		Tilting	B axis	B axis	B axis	B axis	






- Before place your order, please advise us the type of AC-SERVO-MOTOR and SERVO-DRIVE for CNC control system
- Specification of V-35 and G Mate controller, refer to P : 19 and P : 22




- ◆ Suitable for conventional Milling, Boring and Tapping Machine.
- ◆ Suitable to E.D.M. machine, for machining workpieces of wheel-moulding machine of bicycle, motorcycle.
- ◆ Manual tilting, Rotating by CNC control.

MODEL NO : CNCMT-321 A

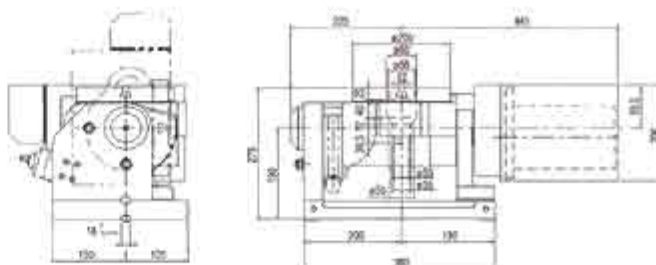
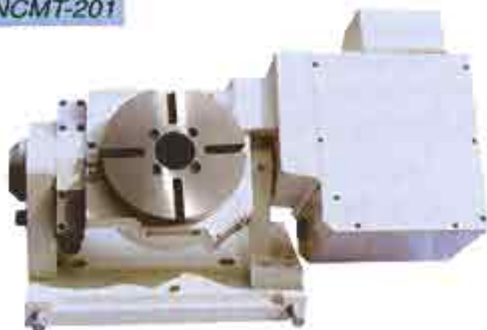
- Indexing accuracy class
- Table Dia
- CNCMT: Type of Manual Tilting Rotary Table
- TNC: Type of Tilting Dividing Head

ITEM / MODEL		CNCMT-201		CNCMT-321		CNCMT-401	
Table Dia (mm)		ø200		ø320		ø400	
Table Height in Horizontal (mm)		295		330		375	
Center Height in Vertical (mm)		150		270		290	
Over all Height in Vertical (mm)		295		755		840	
Thru-Hole Dia (mm)		BT50		80"		80"	
Width of T-slot (mm)		12"		14"		14"	
Width of Guide Block (mm)		18"		18"		18"	
Servo motor type	MELDAS	Rotating	Tilting(Scale)	Rotating	Tilting(Scale)	Rotating	Tilting(Scale)
	FANUC	HA-40 α 3	Manual	HA-100 α 6	Manual	HA-100 α 12	Manual
Gear Ratio		1:90		1:180		1:180	
Min. Increment(degree)		0.001°		0.001°		0.001°	
Max. R.P.M. (rpm) (motor : 2000 / rpm)		22.2		11.1		11.1	
Load capacity (Tilting axis)	0° (kg)	80		150		250	
	90° (kg)	40		80		150	
Tilting degree		0-105°		0-100°		0-100°	
Rotation axis	Pneu. clamp force(kg•m)(P:5kg•cm ²)	25		71		92	
	Hydro. clamp force(kg•m)(P:20kg•cm ²)	-		142		184	
	Indexing Accuracy (sec.)	25"		15"		15"	
	Repeatability (sec.)	4"		4"		4"	
N.W. (kgs)		90		310		380	
Max. Load		W=40 kg		W=150 kg		W=300 kg	
		W=80 kg		W=350 kg		W=500 kg	
Max. Radial Load		F=600 kg		F=1375 kg		F=1585 kg	
		FxL=16 kg•m		FxL=26 kg•m		FxL=36 kg•m	
		FxL=20 kg•m		FxL=92 kg•m		FxL=122 kg•m	
Max. Working Inertia		4 kg•cm•sec ²		45.7 kg•cm•sec ²		102 kg•cm•sec ²	
Spindle Drive Torque		6 kg•m		28 kg•m		40 kg•m	

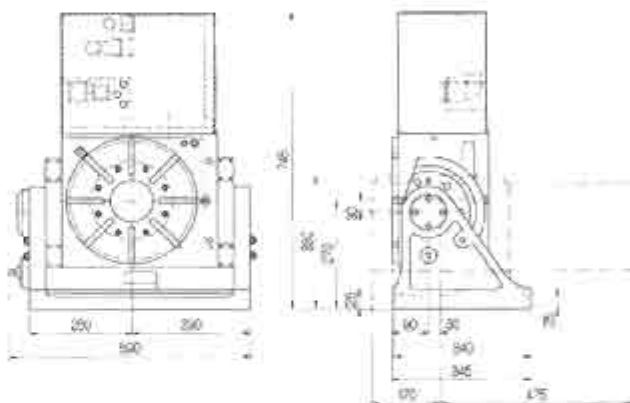
- ◆ Other brand of AC Servo-Motor also could be installed, but outline dimension of motor is required and necessary  Refer to P : 32 Chart 4
- ◆ Up & backside cable outlet is available, slant motor cover also available
- ◆ Standard accessory : eye bolts, clamping blocks

- ◆ To match AC-/DC-/Stepping-Controller→ Refer to P : 21
- ◆ Adapting Tailstock→ Refer to P : 23

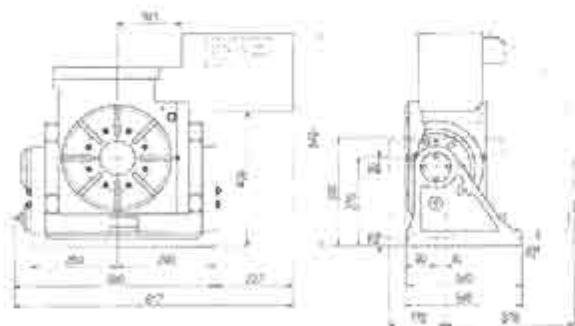
CNCMT-201



CNCMT-321

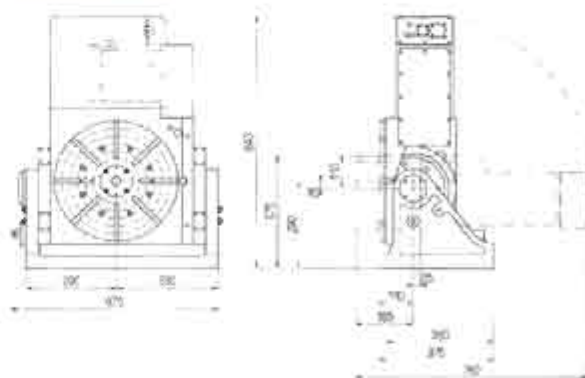


CNCMT-321RR




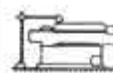

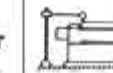

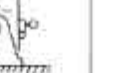
◆ Right side mounted motor also available

CNCMT-401



Accuracy Standards

Unit:mm

ITEM	Table top flatness	Parallelism of table top and frame bottom	Runout of table spindle center	Table top runout	Parallelism of tilting axis center line and frame bottom	Parallelism of table top to frame bottom guide block	An encoder measuring instrument should be used for indexing accuracy measurements (Rotating)
MODEL							
CNCMT-201	0.01	0.02	0.01	0.015	0.02	0.02	25°
CNCMT-321	0.01	0.02	0.01	0.015	0.02	0.02	15°
CNCMT-401	0.02	0.02	0.01	0.015	0.02	0.02	15°



- ◆ Build-in 3pcs hirth coupling, ensure the indexing accuracy ± 5 sec.
- ◆ Could be direct connected to the 4th. axis on machining-center. Also could be connected the M-code by using G.S. single axis AC/DC/Stepping servo controller.
- ◆ Compact design, adapting precision bearing, ensure rigidity and long-term operation.
- ◆ Build-in 3 pieces hirth coupling, table will not lifting-up during rotating.



3 PCS hirth coupling

MODEL NO : NCF-250

- Table Dia.
- Type of NC Face Gear Indexer

ITEM / MODEL	NCF-250	NCF-400
Table Dia (mm / inch)	ø250 / ø9.84	ø400 / ø15.75
Center Height in Vertical (mm / inch)	185 / 7.28	250 / 9.83
Table Height in Horizontal (mm / inch)	200 / 7.87	250 / 9.83
Over all Height in Vertical Without Motor Cover(mm / inch)	315 / 12.40	460 / 18.11
Thru-Hole Dia (mm / inch)	52 ^{mm} / 2.05 ^{inch}	80 ^{mm} / 3.15 ^{inch}
Width of T-slot(mm / inch)	12 ^{mm} / 0.47 ^{inch}	14 ^{mm} / 0.55 ^{inch}
Width of Guide Block (mm / inch)	18 ^{mm} / 0.71 ^{inch}	18 ^{mm} / 0.71 ^{inch}
N.W.(kgs)	110	325

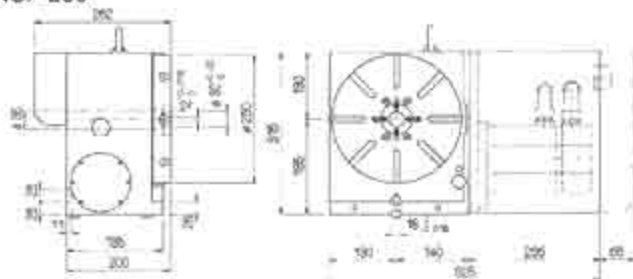
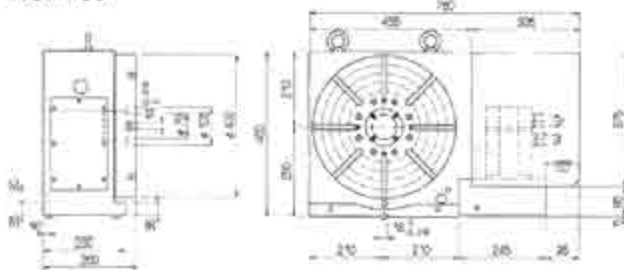
ITEM / MODEL	NCF-250	NCF-400
Servo Motor type	MELDAS	HA-40
	FANUC	HA-100
Gear Ratio	1 : 180	1 : 180
Min. increment (degree)	5°	1° or 5°
Max. R.P.M. (rpm) (motor : 2000 rpm)	11.1	11.1
Repeatability (sec.)	± 1°	± 1°
Clamp Torque (kg·m)	500	600
Load capacity in vertical (with tailstock) (kgs)	250	500

ITEM	Max. Load		Max. Radial Load			Max. Working Inertia	Spindle Drive Torque
	Vertical 	Horizontal 					
NCF-250	W=125kg	W=300kg	F=3500kg	FxL=220 kg·m	FxL=140 kg·m	24 kg·cm·sec ²	13.5 kg·m
NCF-400	W=250kg	W=500kg	F=6000kg	FxL=600 kg·m	FxL=400 kg·m	102 kg·cm·sec ²	54 kg·m

- ◆ Other brand of AC Servo-Motor also could be installed, but outline dimension of motor is required and necessary. Refer to P : 32 Chart 4
- ◆ Up & backside cable outlet is available. slant motor cover also available.
- ◆ Requested hydraulic source : 20 kg·cm² ◆ Standard accessory : eye bolts, clamping blocks

Accuracy Standards

ITEM	Unit:mm						
	Table top flatness	Parallelism of table top and frame bottom	Runout of table spindle center	Perpendicularity of table top to frame bottom	Table top runout	Perpendicularity of table top to frame bottom guide block	Parallelism of center line between headstock & tailstock to frame bottom guide block
NCF-250	0.01	0.01	0.01	0.015	0.01	0.02	0.02
NCF-400	0.015	0.015	0.01	0.02	0.015	0.02	0.02

DIMENSION
NCF-250

NCF-400


- ◆ To match AC-/DC-/Stepping → Refer to P : 21
- ◆ Adapting Tailstock → Refer to P : 23



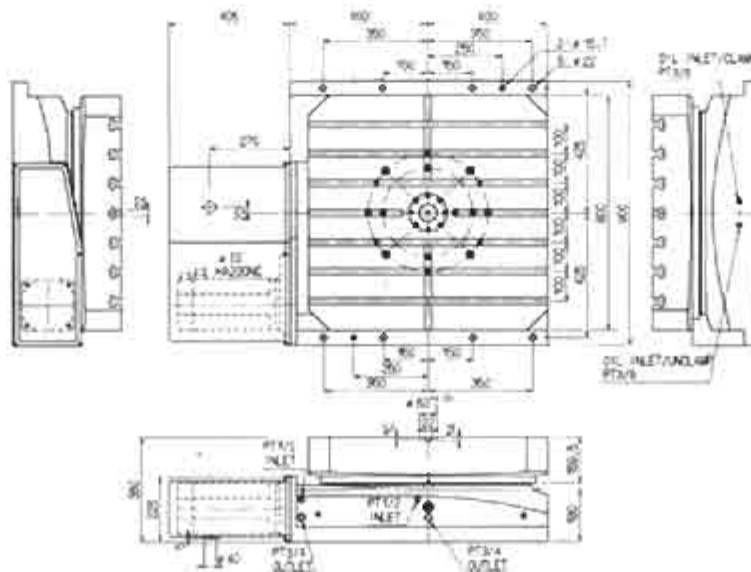
MODEL NO : HT-630, HT-800, HT-1000

- ◆ Suitable for Horizontal Machining Center
- ◆ Rotating Speed can be reached 33.3 RPM.
- ◆ Adapting A special anti-wearing/rigid alloy of bronze/nickel worm wheel and hardened steel worm screw ensure long term indexing accuracy.
- ◆ Double powerful brake system with large size of clamping contact surface suitable for heavy cutting.
- ◆ Adapting 2 pcs or 3 pcs Hirth Coupling for positioning. Repeatability can be reached +/- 0.5 sec. Besides accuracy will not be changed even operation times increasing.
- ◆ Indexing Accuracy according to customer's requirement: +/- 2 sec. or +/- 3 sec.
- ◆ All units in Tables are manufactured from high quality materials and workmanship. Every Table has Running/Accuracy testing for at least 48 hours. All electrical parts are imported from Japan/Germany for performance confidence.

ITEM / MODEL		HT-630		HT-800		HT-1000	
Table Size LxW (mm)		630 x 630		800 x 800		1000 x 1000	
Over all height (mm)		275		360		360	
Center Hole Dia. (mm)		40"		60"		60"	
T-slot size (mm)		20"		22"		22"	
Rotating direction		CW / CCW		CW / CCW		CW / CCW	
Power of drive	Clamping/unclamping	Hydraulic 25kg/cm ²		Hydraulic 35kg/cm ²		Hydraulic 35kg/cm ²	
	Revolving (Servo Motor Type)	MELDAS	HA-100 NC	MELDAS	HA-200 NC	MELDAS	HA-200 NC
		FANUS	or 12	FANUS	or 22	FANUS	or 22
		or other brand with same torque as above		or other brand with same torque as above		or other brand with same torque as above	
Gear Ratio		1:360		1:180		1:180	
Max. R.P.M. of working table (rpm)		5.5 (Motor : 2000/rpm)		11.1 (Motor : 2000/rpm)		11.1 (Motor : 2000/rpm)	
Min. Increment Degree		1° or 5°		1°		1°	
Max. load weight vertically in theory(kgs)		4000		4500		4500	
Max. loading weight (kgs)		2500		3000		3000	
Clamping force (kg)		4000		7000		7000	
Lifting distance during clamp / unclamp (mm)		5		0		0	
Weight (kgs)		525		1360		1720	
Indexing Accuracy (sec.)		± 3"		± 3"		± 3"	

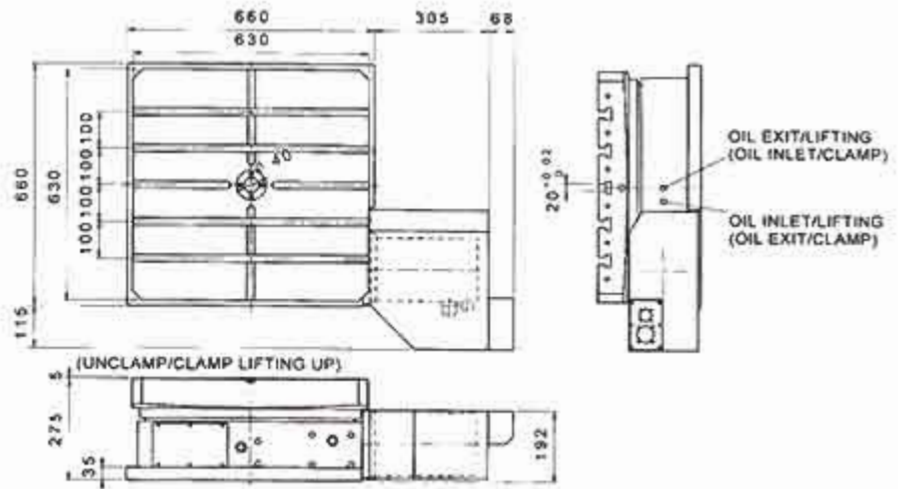
- ◆ Other brand of AC Servo-Motor also could be installed, but outline dimension of motor is required and necessary. Refer to P. 36 Chart 4
- ◆ Up & backside cable outlet is available, slant motor cover also available.
- ◆ Requested hydraulic source : 20 kg/cm² ◆ Standard accessory : eye bolts, clamping blocks
- ◆ All specifications can be modified according to customers' requirement.

HT-800

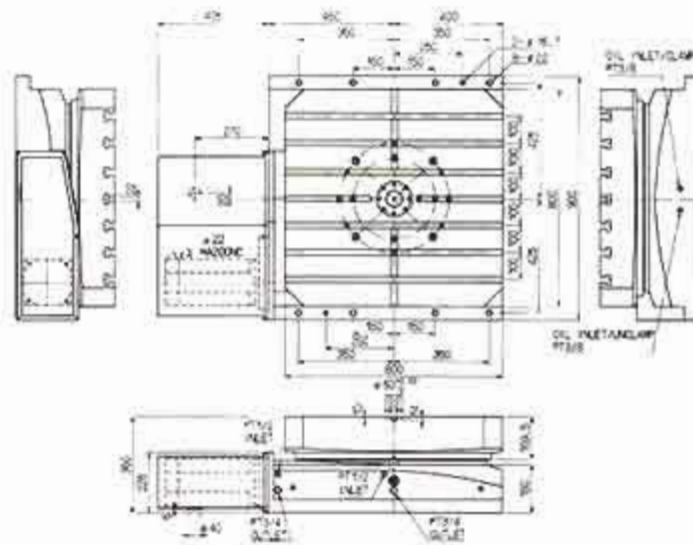


DIMENSION

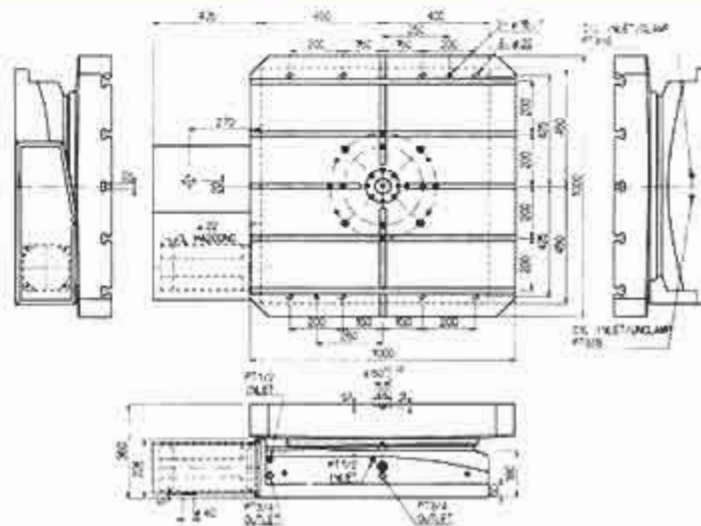
HT-630



HT-800



HT-1000

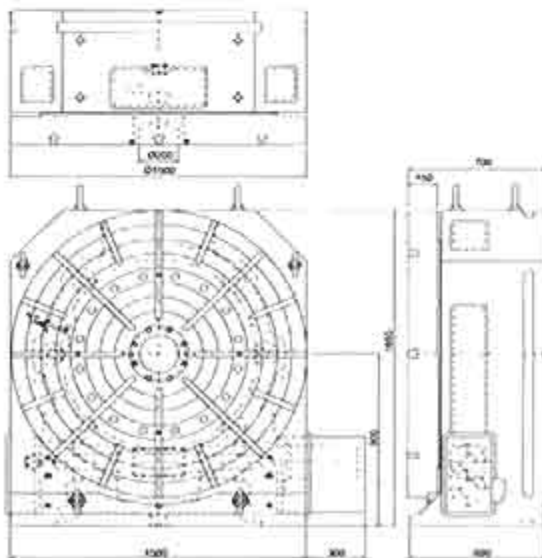




- ◆ Table size from size 1,000mm to size 2,000mm can be manufactured in both Vertical/Horizontal position. With high accuracy and high loading capacity which are suitable for heavy machining and metrology applications.
- ◆ Table size up to 2,000~5,000mm or special requested specifications are acceptable.
- ◆ All units in Tables are manufactured from high quality materials and workmanship. Every Table has Running/Accuracy testing for at least 48 performance confidence.
- ◆ High Heavy loading capacity axial-radial Roller Bearings are incorporated to provide high rigidity.
- ◆ By high torque two ways(in-out) Hydraulic.
- ◆ Can be designed by customers' drawings Saddle.
- ◆ High precision Heidenhain angular Encoders with Rotating Coupling or Mitsubishi brands or others brand...
- ◆ 0.001 degree increment is standard.
Can be chosen by customers' request. +/- 3 sec. or +/- 6 sec.

ITEM / MODEL	CNC-1000H/V	CNC-1200H/V	CNC-1500H/V	CNC-2000H/V
Table Size (mm)	1000	1200	1500	2000
T-slots Size (mm)	18	22	28	28
Total Length (mm)	610	810	1000	1100
Total Width (mm)	1010	1200	1500	2000
Total Height (mm)	1055	1300	1650	2150
Center Height (mm)	550	675	900	1150
Center Holes (mm)	100	100	200	200
Weight (kgs)	4500	6000	7000	8000
Max.Loading (kgs)	6000	8000	10000	10000
Max. Machining Force (kg)	8000	8000	10000	15000
Clamping Torque (kgm)	2200	3000	6500	6500
Machining Torque (kgm)	350	350	700	700
Gear Ratio	1 / 360	1 / 360	1 / 720	1 / 720
Faceplate Runout (mm)	0.02	0.02	0.02	0.03
Runour Of Center Bore (mm)	0.01	0.01	0.01	0.01
Squareness Of Table To Base (mm)	0.01	0.01	0.01	0.01

◆ All specifications can be modified according to customers' requirement.

CNC-1500


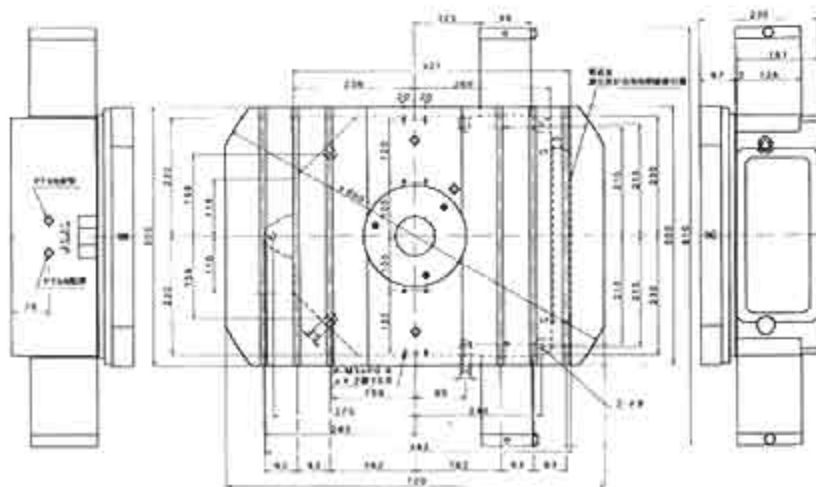


- ◆ Suitable for working table changing of Moving Column Type Machining Center.
- ◆ Exchanging Speed can be reached 5 second.
- ◆ Suitable for Swing Type Working Table, high accuracy machining.
- ◆ Hydraulic Clamping, high rigid brake structure to make sure any working environment for heavy cutting.
- ◆ Adapting 3 pcs Hirth Coupling, no lifting during Working Table Changing to shorten dividing time and eliminate defects of positioning phenomenon.
- ◆ Double powerful brake system with large size of clamping contact surface suitable for heavy cutting.
- ◆ Repeatability can reach +/- 1.5 sec. Besides accuracy will not be changed even operation times increasing.
- ◆ All units in Tables are manufactured from high quality materials and workmanship. Every Table has Running/Accuracy testing for at least 48 hours. All electrical parts are imported from Japan/Germany for performance confidence.

ITEM / MODEL	TT5030	TT6040	TT8045
Driving Source	Hydraulic	Hydraulic	Hydraulic
Over all height (mm)	230	270	340
Working Table size L x W (mm)	500x300	600x400	800x450
Center Hole Dia. (mm)	Ø50"x12.5	Ø60"x13	Ø80"x15.5
Max. Hrdro. Input pressure (kg/cm ²)	Under 30	Under 35	Under 35
Number of divisions	2	2	2
Rotating direction	C.W. / C.C.W.	C.W. / C.C.W.	C.W. / C.C.W.
Clamping Force (kg)	2500	6150	9600
Max. GD ² (kg.m ²)	160	450	1200
Max. loading (kg)	600	1200	2400
Allowable position of vertical force (mm)	Ø230 / Ø400	Ø300 / Ø500	Ø400 / Ø700
Allowable vertical force (kg)	3000 / 5000	4000 / 7000	6000 / 10000
Allowable max. torque (kg/cm ²)	10000	15000	32000
Weight (kgs)	250	550	950
Flatness of table surface (mm)	0.02	0.02	0.02
Top and bottom Parallelism (mm)	0.02	0.02	0.02
Center hole Deviation (mm)	0.02	0.02	0.02
Asume center deviation (mm)	0.02	0.02	0.02

◆ All specifications can be modified according to customers' requirement.

TT-Table



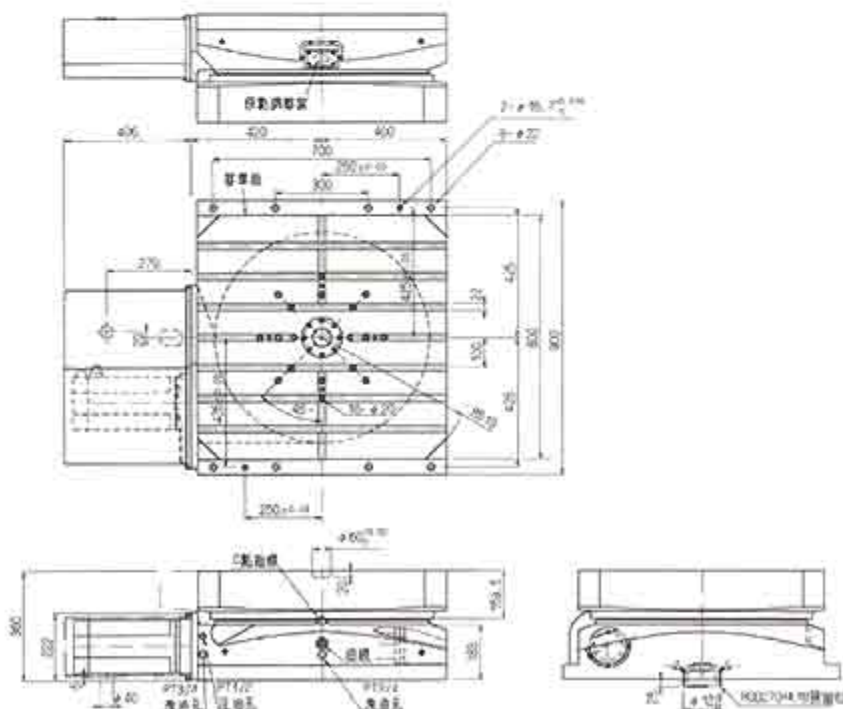


- ◆ Suitable for Horizontal Machining Center.
- ◆ Hi-Accuracy, Adapting A special anti-wearing alloy of bronze/nickel worm wheel and hardened steel worm screw ensure long term indexing accuracy.
- ◆ Could be manufactured according to customers' designing and interface of machine Saddle.
- ◆ Hydraulic Clamping, high rigid brake structure to make sure any working environment for heavy cutting.
- ◆ Table size from size 400mm to 3,000mm or manufactured according to customer's requirement, high loading/accuracy design also available suitable for heavy machining and metrology applications.
- ◆ Build-in hydraulic ports system suitable for Special Machine of Horizontal machining Center and Automobile/Motorbike Industrial.
- ◆ All units in Tables are manufactured from high quality materials and workmanship. Every Table has Running/Accuracy testing for at least 48 hours. All electrical parts are imported from Japan/Germany for performance confidence.
- ◆ Random dividing 0.001 degrees, Indexing Accuracy according to customer's requirement; ± 1.5 sec. , ± 3 sec. or ± 6 sec.
- ◆ Repeatability: ± 1 sec. or ± 2 sec.

ITEM / MODEL	HR-400	HR-500	HR-630	HR-800
Table Size (mm)	400	500	630	800
T-slots size (mm)	14	18	18	22
Table Swing Dia. (mm)	500	660	800	1040
Total Height (mm)	275	310	385	385
Max. Loading (kgs)	500	600	1200	2000
Vertical Max. Force (kg)	1585	1880	2080	2080
Load Capacity During Rotating (kg/cm ²)	102	191	405	816
Clamping Force (kgs)	3500	5500	6500	7000
Machining Torque (kg/m)	122	230	330	350
Parallelism Of Table Top and Frame Bottom (mm)	0.015	0.015	0.025	0.03

◆ All specifications can be modified according to customers' requirement.

HR-800



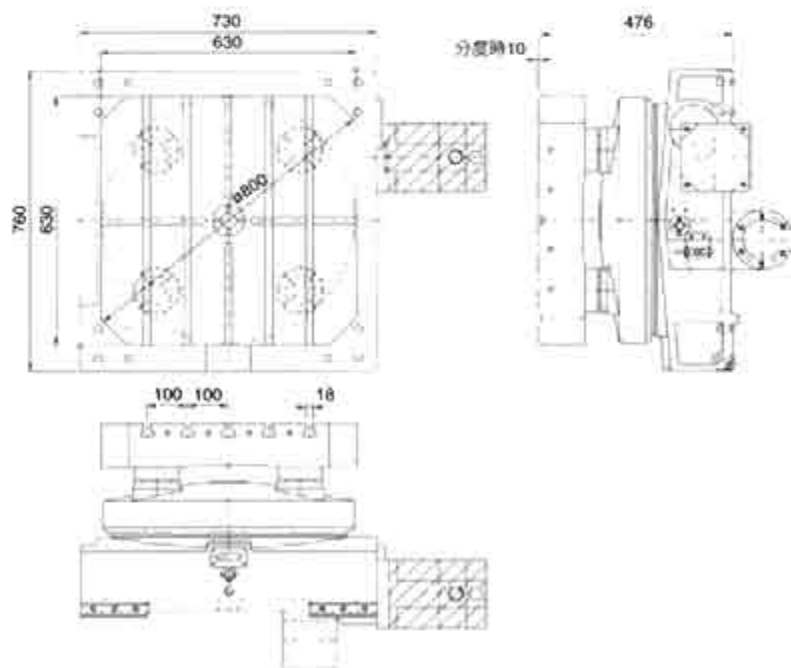


- ◆ High accuracy and tested modular system for Table (Receiver) & single/Multi Pallets design. Especially suitable for new Horizontal Machining Centers as well as for existing Customers' Design Horizontal Table/Pallets manufacturing.
- ◆ All units Table(Receiver) & single/Multi Pallets are manufactured from high quality materials and workmanship. Every Table has Running/Accuracy testing for at least 48 hours. All electrical parts are imported from Japan/Germany for performance confidence.
- ◆ Can be finished according to DIN, ISO or Customers' design. All pallets are exchangeable for every Index Tables or CNC Tables (Receivers) Pallets changing type can be Swing or Forward/Backward designed.
- ◆ By high accuracy 4 pcs Cones/Cups.
- ◆ By Hydraulic 4 pcs Pull Studs or Clamping Plate.
- ◆ Can be designed by customers' drawings Saddle.
- ◆ 1 degree or 0.001 degree increment are optional Can be chosen by customers' request. +/- 2 sec. or +/- 3 sec.

ITEM / MODEL	APR/API 400	APR/API 500	APR/API 630	APR/API 800
Pallet Dimensions (mm)	400	500	630	800
T-slots Size (mm)	14	18	18	22
Rounded Corners (mm)	500	660	800	1040
Total Height (mm)	370	425	480	540
Clamping Station Weight (kgs)	365	600	750	900
Pallet Weight (kgs)	75	120	170	200
Max. Loading (kgs)	500	600	1200	2000
Vertical Machining Force (kg)	1585	1880	2080	2080
Moment of Load (kg/cm ²)	102	191	405	816
Clamping Force (kgs)	3500	5500	6500	7000
Machining Torque (kg/m)	122	230	330	350
Parallelism (mm)	0.015	0.015	0.025	0.03
Repeatability (mm)	0.01	0.01	0.01	0.01

◆ All specifications can be modified according to customers' requirement.

APR-630





MODEL : V-35

- ◆ Easy operation, saving space of machine shop.
- ◆ Connecting with CNC Rotary Table to M-Code of CNC M/C for equal division indexing machining.
- ◆ The best solution for conventional M/C which could not retrofitted 4th axis.
- ◆ Program capacity=10 sets; minimum increment 0.001°
- ◆ RS232 standard interface could be connected to PC for programming and storage.



Subtable Rotary Table :

CNC-101R	CNC-151R(RB)	CNC-201R(RB)
CNC-251R(RB)	CNC-321R(RV)	NCF-250
CNCB-321R(RV)	CNCT-201	
CNCMT-201	CNCMT-321	

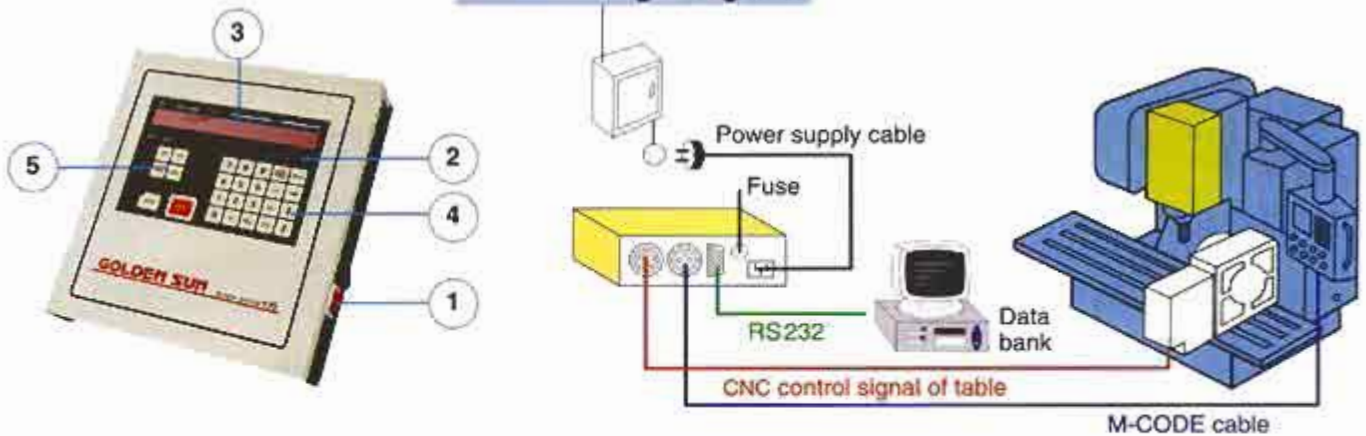
ITEM	SPECIFICATION
Min. Increment	0.001°
Equal Dividing	2-999, equal dividing
Program Capacity	10 sets of program (0-9)
Step Capacity	99 steps for each program
Input System	Key board
Programming System	Combined use of incremental / absolute (Free selection 0/1)
Zero Return	Machine zero return / absolute zero return
Feedrate	1-999 / sec.
Stop Function	1. Table rotation slows down and stop 2. Current program stop to execute
Brake Function	0-99 sec. Can be set
Jump Function	Jump to sub-program
Loop Count	Up to 999 times
Key-Lock Function	Set parameter#7 to (1)
Mode Selection After Power On	PROGRAM mode / RUN mode
Backlash Adjustment	Parameter #10 (0-999 encoder pulse)
Previous Step Display Function	Previous step can be displayed by pushing ↑ key
Next Step Display Function	Next step can be displayed by pushing ↓ key
Standard Parameter Function	Parameter #1 -14 can be set easily
Required Outside Signal	Automatic operation can be done by M-signal
Servo Motor	DC servo motor with feed back unit
Connection Cable	For input power / motor power / interface signal / limit switch
Input Power	110V ± 10% transformer AC-220V to AC-110V/10A also available

※When you equipped a rpm 3000 Motor & gear-ratio of Rotary Table is 1:180, the max. rpm is 16.6※

Examples of Programming

	<p>(1) Push MODE : PROG is lit. (2) Push → : S is lit. (3) Input 45° (4) Push → : F is lit. (5) Input 30 (Feedrate) (6) Push → : L is lit. (7) Input 1 (one time) (8) Push START : (The table rotates)</p>
	<p>(1) Push MODE : PROG is lit. (2) Input 2 (Equal dividing code) (3) Push → : S is lit (4) Input 360 (Dividing degree) (5) Push → : F is lit. (6) Input 30 (Feedrate) (7) Push → : L is lit. (8) Input 8 (Dividing number) (9) Push START : (The table rotates)</p>

Connecting Diagram



SIZE : L 320 x W 290 x H 90 (mm)

 ON POWER	<p>1. POWER SWITCH This switch is located at right-hand side of controller box.</p>
 PRO RUN P S F L	<p>2. LED INDICATORS</p> <ol style="list-style-type: none"> The controller is in PROGRAM mode. The controller is in RUN mode. Displays current position of rotary table in Display Scan. Displays the programming angle or position. Displays the programming speed. Loop count for one step. The table rotates as programmed. The rotating table slows down and stops.
 START STOP	<p>3. LED DISPLAY</p> <ol style="list-style-type: none"> Prog. No 10 programs can be stored in the controller, rangin from 0-9. Step: 99 steps for each program. Code: OP code setting is possible from 0-9 or A,B,C. Data: Displays the angle · position · various programmed data.

 1 ~ 9 +/- STEP PROG INS DEL CLR MODE → ↑ ↓ JOG + JOG - ZERO HOME RS-232	<p>4. PROGRAMMING KEYS</p> <ol style="list-style-type: none"> Numeric and decimal keys: To enter data of program. Table rotation is CW or CCW. For setting program or step number. In PROGRAM mode, insert a program step. In PROGRAM mode, delete a program step. In RUN mode, reset current position to Zero when F LED indicator is lit. In RUN mode, erase an error input. In RUN mode, step 01, push this key, then push "CLR" key, which will clear the memory of program and set every step to End. For mode change either in the RUN or PROGRAM mode. Changes display of the data from P→S→F→L→P. In PROGRAM mode for entering and changing the parameter. Previous step can be displayed. Next step can be displayed. <p>5. OPERATION KEYS</p> <ol style="list-style-type: none"> Jog rotary table for different direction. Return to absolute zero position. Return to the mechanical home position. <p>Interface possible connecting to personal computer.</p>
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MODEL : SUPER II

- ◆ Easy operation, saving space of machine shop.
- ◆ Connecting with CNC Rotary Table to M-Code of CNC M/C for equal division indexing machining.
- ◆ The best solution for conventional M/C which could not retrofitted 4th axis.
- ◆ Program capacity = 3 sets, minimum increment 0.01° -

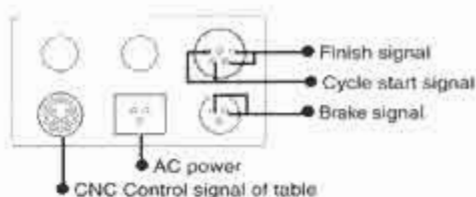
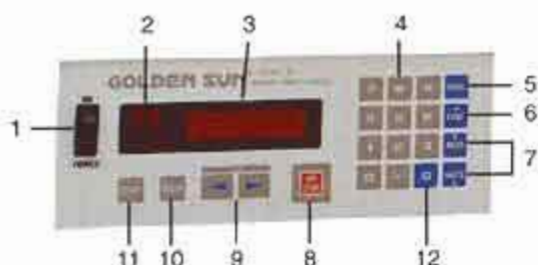
Suitable Rotary Table :







CNC-101R	CNC-151R(RB)	CNC-201R(RB)
CNC-251R(RB)	CNC-321R(RV)	
CNCB-321R(RV)	NCF-250	
CNCMT-201	CNCMT-321	






ITEM	SPECIFICATION	ITEM	SPECIFICATION
Min. Increment	0.01°	Key-Lock Function	Set Parameter #7 to (1)
Programmable Angle	1-540°	Mode Selection After Power On	Program mode / Run mode
Max. Equal Dividing	± 2-999 equal dividing	Backlash Adjustment	Parameter# 17
Emergency Stop	Whole system stop	Previous Step Display Function	Pushing "WRITE" key
Input System	key board	Next Step Display	Pushing "READ" key
Zero Return	Soft ware zero return	Standard Parameter Function	Parameter #1-17 can be set easily
Feedrate	F1-F30 (degree/sec.)	Motor	DC Stepping motor with feed back unit
Program Capacity	Three programs(0,1,2),99 steps for each program	Connection Cable	For input power/pulse coder, motor power cycle start / finish signal / brake signal
Jump Function	Jump to sub-program (code. 95)	Input Power	AC 240V/ 50Hz / signal phase
Loop Count	Up to 999 times per step		

Example

Step 1	Turn (Power) switch on.	Step 5	Push PROG to feed-rate (F), input "30"
Step 2	Push and hold PROG and release display becomes blinking	Step 6	Push FUNC to loops (L), input "4"
Step 3	Push and hold CLR for 5 sec. or "00" display	Step 7	Push PROG display become no blinking
Step 4	Key in "9000"	Step 8	Push START table start rotating 4 times



     	<p>1. POWER SWITCH</p> <p>2. PROGRAM STEP DISPLAY SCAN Present the step number you are on.</p> <p>3. DATA DISPLAY SCAN To show either position, step angle feedrate or loop count.</p> <p>4. DATA ENTER KEYS Enter in data of program</p> <p>5. MODE BUTTON To select in the PROGRAM or RUN mode • If the display is steady, you are in RUN mode. • If it is flashing on and off, you are in PROGRAM mode.</p> <p>6. FUNCTION BUTTON To view the piece of data in the display scan of the controller.</p> <p>7. STEP READ or WRITE BUTTON • Scans step number from 1-99. • To read or write present or next step.</p>
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    	<p>8. EMERGENCY STOP BUTTON • The rotating table shows down and stop. • When (11) CYCLE START BUTTON is depressed again, the table rotates the remaining angle of the program.</p> <p>9. JOG BUTTON To jog the movement at single step, holding for rapid movement after 150 pulse.</p> <p>10. ZERO RETURN BUTTON In the RUN mode, push the button will return the table to Zero Point.</p> <p>11. CYCLE START BUTTON The table rotates as programmed.</p> <p>12. CLEAR BUTTON • In the RUN mode, it resets the "P" display to zero. • In the PROGRAM mode, it is used to clear the current line or collect the error</p>
---	--



MODEL : G mate

- ◆ Easy operation, saving space of machine shop.
- ◆ Connecting with CNC Rotary Table to M-Code of CNC M/C for equal division indexing machining.
- ◆ The best solution for conventional M/C which could not retrofitted 4th axis.
- ◆ Program capacity = 9 sets, minimum increment 0.001° -

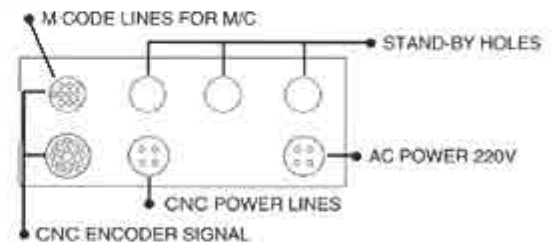
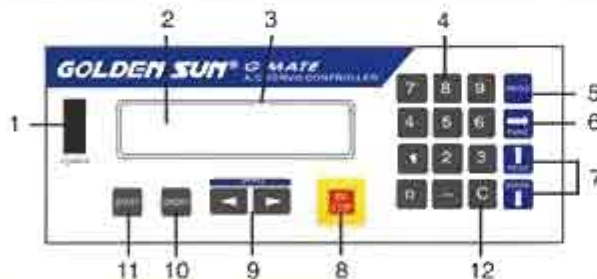
Suitable Rotary Table :

CNC-101R	CNC-151R(RB)	CNC-201R(RB)
CNC-251R(RB)	CNC-321R(RV)	
CNCB-321R(RV)	NCF-250	
CNCMT-201	CNCMT-321	


ITEM	SPECIFICATION	ITEM	SPECIFICATION
Min. Increment	0.001°	Key-Lock Function	Set Parameter #7 to (1)
Programmable Angle	1-999°	Mode Selection After Power On	Program mode / Run mode
Max. Equal Dividing	2-999 equal dividing	Backlash Adjustment	Parameter#17
Emergency Stop	Whole system stop	Previous Step Display Function	Pushing "WRITE" key
Input System	key board	Next Step Display	Pushing "READ" key
Zero Return	Can be compensated by software / hardware	Standard Parameter Function	Parameter #1-17 can be set easily
Feedrate	F1-F2000 (degree/sec.)	Motor	Meldas HC motor with feed back unit
Program Capacity	Nine programs, 99 steps for each program	Connection Cable	For input power/pulse coder, motor power, cycle start/finish signal/brake signal
Jump Function	Jump to sub-program (code. 95)	Input Power	AC 240V/ 50Hz/ signal phase
Loop Count	Up to 999 times per step		

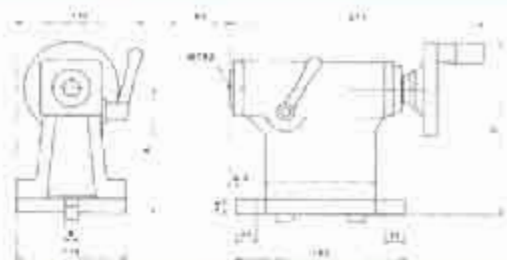
Example

Step 1	Turn (Power) switch on.	Step 5	Push PROG to feed-rate (F), input "30"
Step 2	Push and hold PROG and release display becomes blinking	Step 6	Push FUNC to loops (L), input "4"
Step 3	Push and hold CLR for 5 sec. or "00" display	Step 7	Push PROG display become no blinking
Step 4	Key in "9000"	Step 8	Push START table start rotating 4 times

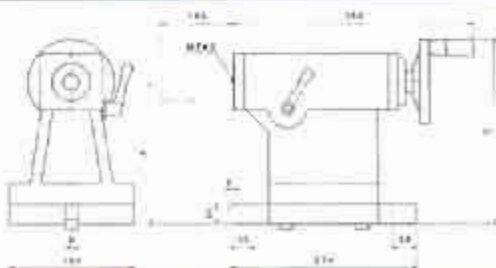


 POWER	<ol style="list-style-type: none"> POWER SWITCH PROGRAM STEP DISPLAY SCAN Present the step number you are on. DATA DISPLAY SCAN To show either position, step angle feedrate or loop count. DATA ENTER KEYS Enter in data of program MODE BUTTON To select in the PROGRAM or RUN mode • If the display is steady, you are in RUN mode. • If it is flashing on and off, you are in PROGRAM mode FUNCTION BUTTON To view the piece of data in the display scan of the controller. STEP READ or WRITE BUTTON • Scans step number from 1-99. • To read or write convenient or next step.
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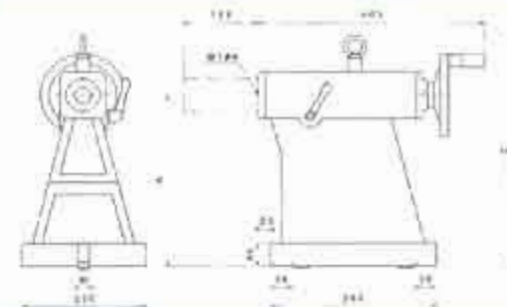
 EM STOP	<ol style="list-style-type: none"> EMERGENCY STOP BUTTON • The rotating table shows down and stop. • When (11) CYCLE START BUTTON is depressed again, the table rotates the remaining angle of the program. JOG BUTTON To jog the movement at single step, holding for rapid movement after 150 pulse ZERO RETURN BUTTON In the RUN mode, push the button will return the table to Zero Point. CYCLE START BUTTON The table rotates as programmed. CLEAR BUTTON • In the RUN mode, it resets the "P" display to zero. • In the PROGRAM mode, it is used to clear the current line or collect the error
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TSA-101-530A


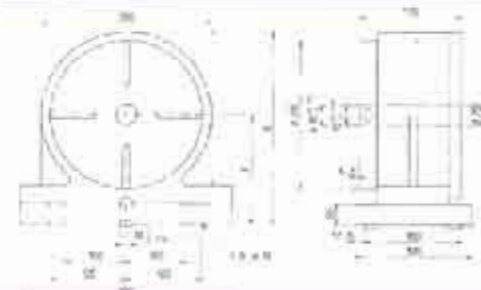
MODEL	A	B	C	Center Taper	Suitable Rotary Table
TSA-101	115	14	185	MT#2	CNC-101R
TSA-530	135	18	185	MT#2	CNC-151R, 201R, 201RB
TSA-530A	150	18	200	MT#2	CNCMT-201

TSA-728-984B


MODEL	A	B	C	Center Taper	Suitable Rotary Table
TSA-728	185	18	250	MT#3	CNC-251R, 251RB NCF-250 CNCB-251R
TSA-728A	190	18	255	MT#3	CNCT-202
TSA-826	210	18	275	MT#3	CNC-321R, 321RV CNCB-321R, 321RV
TSA-984	250	18	315	MT#3	CNC-401RV CNCB-401RV NCF-400
TSA-984A	255	18	320	MT#3	CNCT-321
TSA-984B	270	18	345	MT#3	CNCMT-321

TSA-1220-1890


MODEL	A	B	C	Center Taper	Suitable Rotary Table
TSA-1220	310	18	420	MT#4	CNC-501RV CNCB-501RV, 321RV CNCT-451
TSA-1575	400	18	510	MT#4	CNC-631RV CNCB-631RV
TSA-1890	480	22	590	MT#4	CNC-801RV CNCB-801RV CNCT-631

TSA-251S


ITEM/ MODEL	Table Dia(mm)	(A)Center Height in Vertical(mm)	(B)Over all Height in Vertical(mm)	Thru-Hole Dia (mm)	Width of T-slot (mm)	Width of Guide Block (mm)	Pneu.clamp force (kg * m)	Hydro.clamp force (kg * m)	N.W.(kgs)	Suitable Rotary Table
TSA-251S	250	185	325	35	12 ^{mm}	18 ^{mm}	65 (Power 5kg/cm ²)	115 (Power 20kg/cm ²)	82	CNC-251R
		210	350						85	CNC-321R, 321RV
		250	390						91	CNC-401RV
		310	450						101	CNC-501RV



- ◆ Suitable for the high accuracy machining such as Boring-Milling, Grinding-Machine.
- ◆ Built-in 2 pieces hirth coupling for positioning, indexing accuracy +/- 3 sec, ensure a long-term operation.
- ◆ Powerful clamping design, allow heavy cutting and boring.
- ◆ Clamping / Unclamping by pneumatic, easy operation.
- ◆ The body is FC-35 cast iron, durable and will last longer without deformation.

MODEL NO : GCT-600

- Size of Table
- Type of precision index table

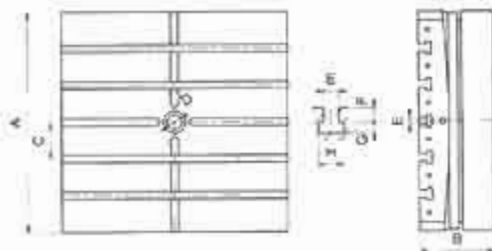


2 PCS hirth coupling








ITEM / MODEL	GCT-300	GCT-450	GCT-600	GCT-700	GCT-800	GCT-1000	GCT-1200	GCT-1400	GCT-1800
Table size L x W (mm)	300x300	450x450	600x600	700x700	800x800	1000x1000	1200x1200	1400x800	1800x1400
Height (mm)	165	170	200	220	280	300	340	290	340
Spindle hole (mm)	-	ø30	ø40	ø40	ø60	ø60	ø80	ø60	ø80
T-slot (mm)	12	18	20	20	22	22	22	22	22
Table rotating	clockwise and counterclockwise								
Table Lifting up & Clamp down stroke (mm)	5	5	5	5	8	8	8	8	8
Driving	Longitudinal	Air Pressure 5~8 kg/cm ²						HYDRAULIC PRESSURE 30 kg/cm ²	
	Revolving	Manual							
Number of division (degree)	5°	1° or 5°							
Max. load weight in theory (kgs)	1200	2400	3400	3400	4500	6000	7000	16000	26000
Allowable load weight (kgs)	500	1000	2000	2000	3000	5000	6000	13000	21000
Clamping capacity (kgs)	-	2200	3200	3200	5400	5400	8100	6000	13000
N.W. (kgs)	90	200	400	600	900	1200	2000	1350	3000

DIMENSION

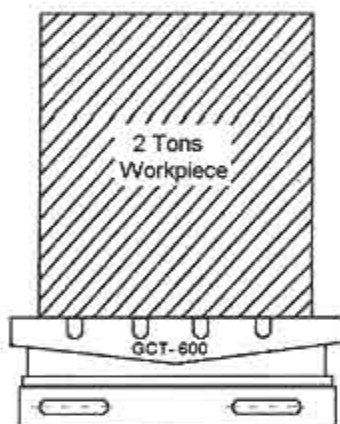
GCT-300~1800



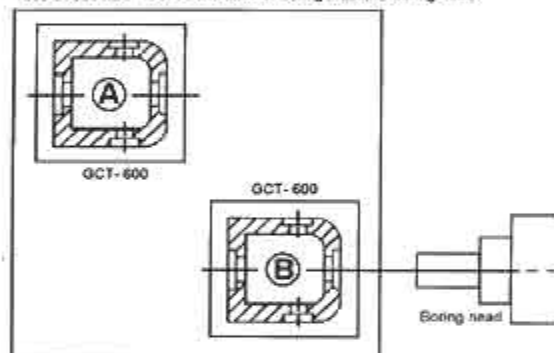
	GCT-300	GCT-450	GCT-600	GCT-700	GCT-800	GCT-1000	GCT-1200	GCT-1400	GCT-1800
A	300	450	600	700	800	1000	1200	1400x800	1800x1400
B	165	170	200	220	280	300	340	290	340
C	100	100	100	125	100	150	200	100	200
D	-	30	40	40	60	60	80	60	80
E	12	18	20	20	22	22	22	22	22
F	14	16	20	20	23	23	23	23	23
G	9	12	14	14	15	15	15	15	15
H	23	28	35	35	38	38	38	38	38

Accuracy Standards								Unit:mm	
ITEM	Concentricity of center spigot	Flatness of table surface	Table oscillation	Parallelism between bottom and top surfaces	T-slot right angle	Right angle of table side	Concentricity and T-slot side	Test by NIKON "Auto collimator"	
MODEL								Divide into 4 equal parts	Divide into 72 equal parts
GCT-300	0.01	0.01	0.01	0.01	0.015	0.015	0.015	±2"	±3"
GCT-450	0.01	0.015	0.01	0.015	0.015	0.015	0.015	±2"	±3"
GCT-600	0.01	0.02	0.015	0.02	0.02	0.02	0.02	±2"	±3"
GCT-700	0.01	0.02	0.015	0.02	0.02	0.02	0.02	±2"	±3"
GCT-800	0.01	0.02	0.015	0.02	0.02	0.02	0.02	±2"	±3"
GCT-1000	0.01	0.03	0.02	0.03	0.03	0.03	0.02	±2"	±3"
GCT-1200	0.01	0.03	0.02	0.03	0.03	0.03	0.02	±2"	±3"
GCT-1400	0.01	0.05	0.03	0.05	0.05	0.05	0.04	±2"	±3"
GCT-1800	0.01	0.05	0.03	0.05	0.05	0.05	0.04	±2"	±3"

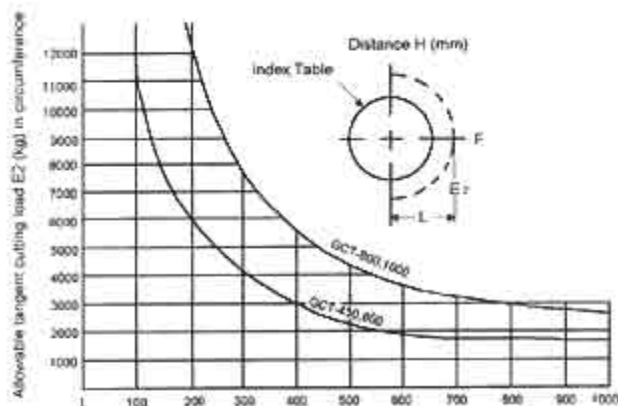
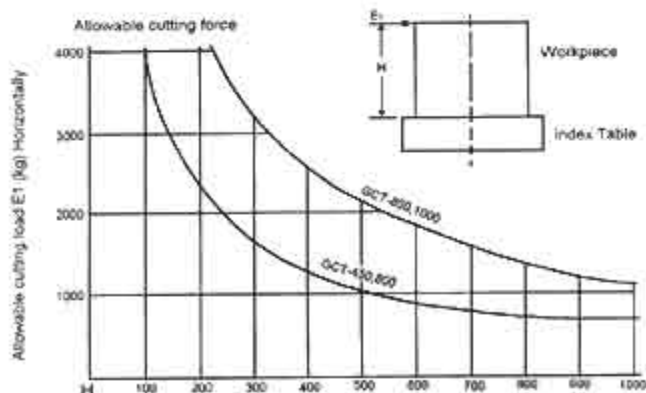
Machining Status



1600 x 1600 mm Work index table of boring machine boring head



Allowed Loading Chart





- ◆ Suitable for round-type special-purpose machine and horizontal M/C for high precision machining.
- ◆ Build-in 3 pieces hirth coupling, without lifting up and down during rotating, shorten the indexing cycle, ensure positioning.
- ◆ Powerful clamping design, allow heavy cutting and boring.
- ◆ Indexing accuracy ± 5 sec. ensure a long-term operation.

MODEL NO : **AD-470**

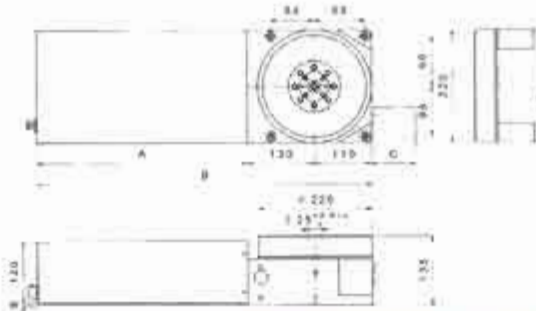
● Table Dia
● Type of Precision
Feed Index Table



Model No.	AD-220	AD-340		AD-470	AD-600	AD-800	
Drive Source	Air Pressure	Air Pressure	Hydraulic Pressure	Hydraulic Pressure	Hydraulic Pressure	Hydraulic Pressure	
Table Dia (mm / inch)	220 / 8.66	340 / 13.39		470 / 18.50	600 / 23.62	800 / 31.50	
Over all Height (mm / inch)	135 / 5.31	180 / 7.09		230 / 9.06	270 / 10.63	340 / 13.39	
L x W (mm / inch)	220x500 / 8.66x17.72	340x750 / 13.39x29.53		530x510 / 20.87x20.08	600x640 / 23.62x25.20	800x650 / 31.5x31.46	
Hole Dia. (mm / inch)	$\phi 25 \times 3 / \phi 0.98 \times 0.35$	$\phi 40 \times 6 / \phi 1.57 \times 0.24$		$\phi 50 \times 12.5 / \phi 1.97 \times 0.49$	$\phi 60 \times 13 / \phi 2.36 \times 0.51$	$\phi 80 \times 15.5 / \phi 3.15 \times 0.61$	
Power of Drive (kg / cm ²)	0-5	5-8	20 Max. Hydraulic Pressure 20	30 Max. Hydraulic Pressure 30	35 Max. Hydraulic Pressure 35	35 Max. Hydraulic Pressure 35	
Number of Divisions	24(Divisor)	24(Divisor)		36(Divisor)	72(Divisor)	72(Divisor)	
Table Rotation	Clockwise or counterclockwise						
Max. clamping capacity (kg)	350	450	690	2500	6150	9600	
Max. GD ² (kg • m ²)	7	40	80	160	450	1200	
Allowable load Weight (kg)	120	120	400	600	1200	2400	
Allowable Cutting Load in vertical	Position	$\phi 200$	$\phi 170$	$\phi 300$	$\phi 230$ $\phi 400$	$\phi 300$ $\phi 500$	$\phi 400$ $\phi 700$
	(kg)	500	2000	4000	3000 5000	4000 7000	6000 10000
Allowable Drog capacity (kg / cm ²)	2000	5000	7000	10000	15000	32000	
N.W, kgs	40	95		250	550	950	

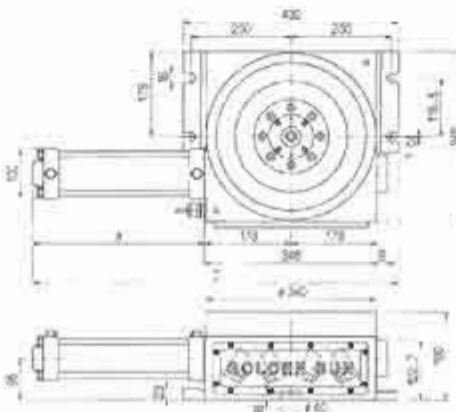
⚠ Please don't use the oil pressure beyond the maximum pressure ⚠

AD-220



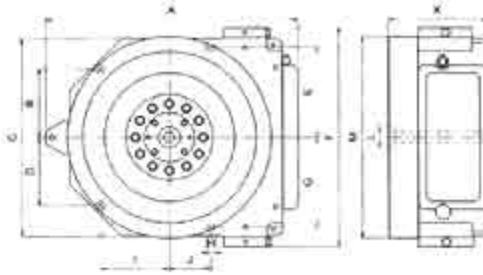
4D lbs	260	500	0
3D	310	550	40
2D	405	645	85
Number of Divisor	A	B	C

AD-340



24D	156.5	20	522.5
16D	165.5	20	531.5
12D	174	20	540
8D	192	20	558
6D	209	20	575
4D	245	20	611
3D	298.4	20	664.4
2D	445	91	882
Number of Divisor	A	B	C

AD-470, 600, 800



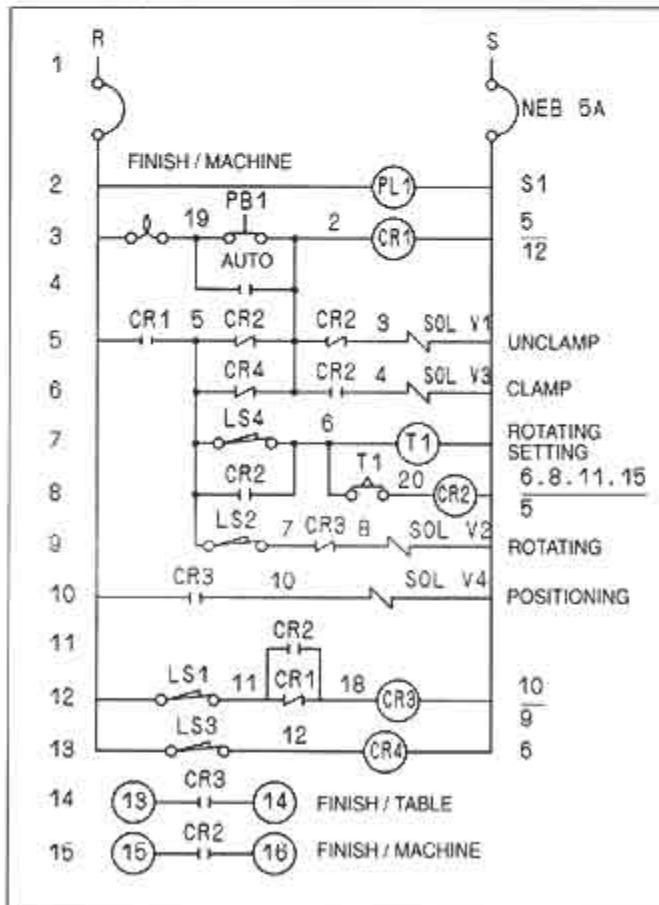
	AD-470	AD-600	AD-800
A	582	717	905
B	159	195	272
C	460	580	780
D	159	195	272
E	210	265	365
F	510	640	840
G	210	265	365
H	20	22	22
I	159	195	272
J	95	125	150
K	230	270	340
L	Ø50 ⁺	Ø60 ⁺	Ø80 ⁺

Accuracy Data

MODEL	AD-220	AD-340	AD-470	AD-600	AD-800
Index Accuracy (sec.)	± 5"	± 5"	± 5"	± 5"	± 5"
Flatness of Table surface(mm)	0.02	0.02	0.02	0.03	0.03
Top and bottom Parallelism(mm)	0.02	0.02	0.02	0.02	0.02
Center hole Deviation(mm)	0.02	0.02	0.02	0.02	0.02
Assume Center Deviation(mm)	0.02	0.02	0.02	0.02	0.02

Precision Feed Index Table for Multi-stations Special purpose Machine

Circuit Diagram of PLC for reference



Connected to the " Internal PLC for the Multi-Stations special purpose machine"

1. Buyer should programming a "internal PLC control " as left-side diagram by themselves.
2. Operation panel should add some necessary switch button.
3. Its economy if PLC has enough I/O points.
4. A normal connection.

(Referring to the next page for Example A and Example C.)

Golden Sun "Index-Mate" connected CNC M/C special-purpose M/C to precision Index Table



G.S. Index-Mate
(SIZE: L 400 x W 300 x H 60 mm)

Upgrade Version-INDEX MATE

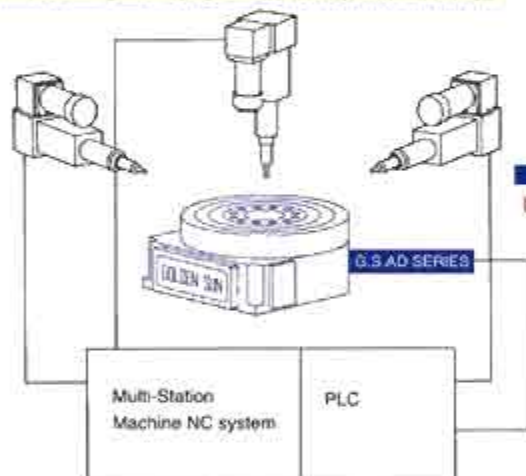
- ◆ Direct connect M-Function code, saving the cost for additional programming of PLC.
- ◆ If your M/C without NC control system, Index-Mate could saving the cost for this additional PLC.
- ◆ Equipped CW/CCW and Manual/Automatic switches, it is easy to adjust your tooling and workpieces.
- ◆ If I/O points of CNC M/C or Special-purpose shortage, Index-Mate will be the best solution.

⟨Refer to Example B & Example D⟩

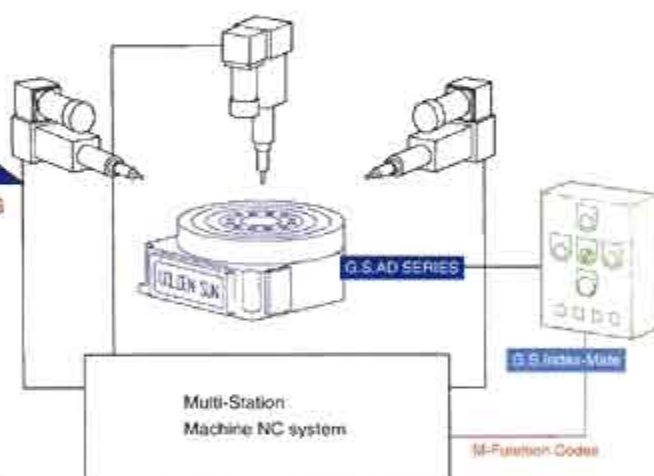
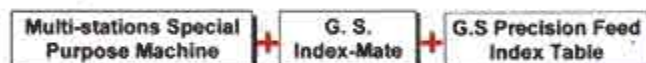
Example A



NC system should intergrade and programming the PLC system (refer to P.30)



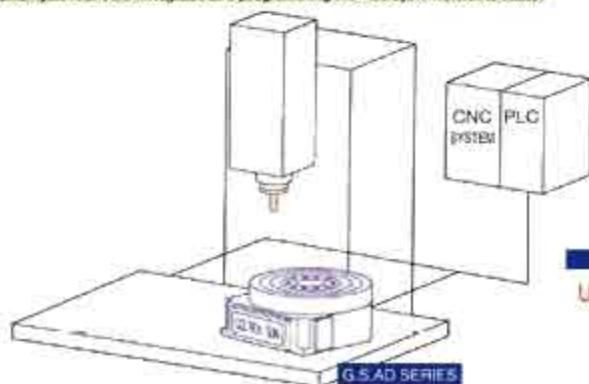
Example B



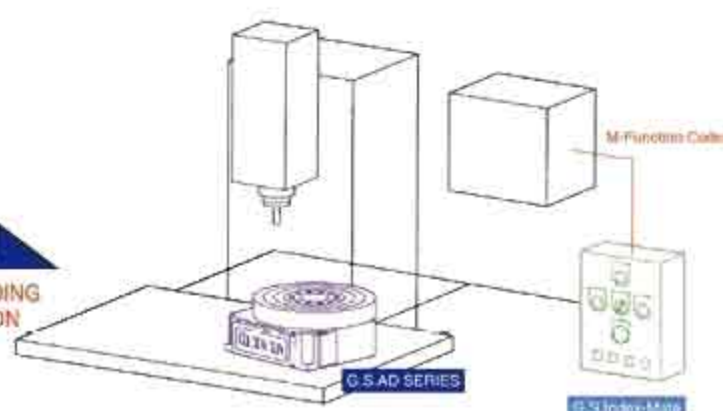
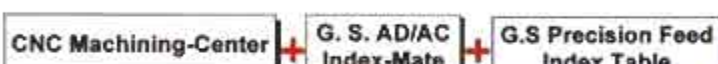
Example C



CNC system should intergrade and programming the PLC system (refer to P.30)



Example D



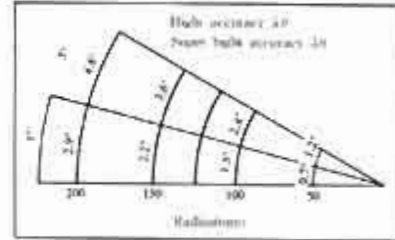
- ◆ We offer all kinds of specifications which including 24T, 36T, 40T, 48T, 60T, 72T, 360T, besides special orders also acceptable.
- ◆ Use SCM21 material, after heat treating it has high rigidity & durable impact force.
- ◆ High accuracy, interchangeable.
- ◆ Indexing accuracy: ± 3 sec, repeatability: ± 1 sec.
- ◆ High QC inspection, accuracy remains the same after long term use.

INDEXING ACCURACY EXPLANATION



3 PCS HIRTH COUPLING

DIMENSION



The Relationship Between Rotary Table DIA. & Hirth Coupling O.D.

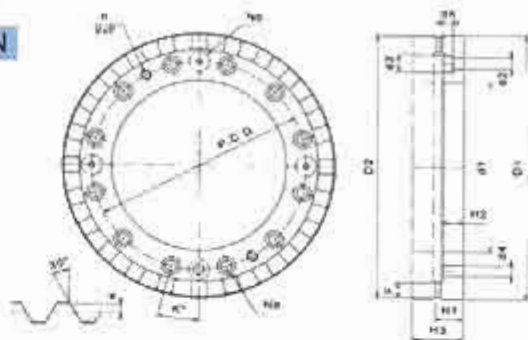
Rotary Table DIA	ø300	ø400	ø500	ø630	ø800	ø1000
Coupling O.D	ø250	ø320	ø400	ø450	ø600	ø800

NO.	Model No.	Outside DIA. D.	Outside DIA. D.	Inside DIA. d.	Number of teeth N	Teeth profile F	Toothed thickness of teeth H.	Inside thickness H.	Total thickness H.	Fixed bolt hole			Positioning pin hole			Withdraw bolt hole		Pitch of top end P	Allowance of pitch step error T				
										Number of holes N	A. C. D. ø	HOLE DIA ø	Top DIA ø	Depth of hole ø	Number of pin hole N	A. C. D. K	Hole DIA ø			Number of teeth hole N	A. C. D. MXP		
1	X, V1 ø24135-060	135	-	60	24	18	18.75	13.5	34	6	80	6.6	11	6.0	3	80	30°	8	2	80	M8 x 1.25	1.75	1.55
	V0	-	175	-	24	-	18.75	13.5	34	8	150	M10	14	8.5	3	150	22.5°	8	2	150	M8 x 1.25	1.75	1.55
2	X, V1 ø24200-120	200	-	120	24	20	21.75	16.5	40	8	140	9.0	14	6.0	3	140	22.5°	8	2	140	M8 x 1.25	1.75	1.55
	V0	-	255	-	24	-	21.75	16.5	40	10	224	M12	17.5	10.5	3	224	18°	10	2	224	M10 x 1.50	1.75	1.55
3	X, V1 ø30200-120	200	-	120	30	20	21.75	16.5	40	8	140	9.0	14	6.0	3	140	22.5°	8	2	140	M8 x 1.25	1.75	1.55
	V0	-	255	-	30	-	21.75	16.5	40	10	224	M12	17.5	10.5	3	224	18°	10	2	224	M10 x 1.50	1.75	1.55
4	X, V1 ø360250-180	250	-	180	360	8	20.2	18	40	12	205	11.0	17.5	10.0	3	205	15°	12	2	205	M10 x 1.5	0.2	0.17
	V0	-	300	-	360	8	20.2	18	40	12	270	M12	17.5	10.5	3	270	15°	12	4	270	M12 x 1.75	0.2	0.17
5	X, V1 ø24270-160	270	-	160	24	24	21.75	16.5	40	8	155	11.0	17.5	10.0	3	195	22.5°	10	2	195	M10 x 1.50	1.75	1.55
	V0	-	330	-	24	-	21.75	16.5	40	12	300	M14	20	12.5	3	300	15°	12	4	300	M12 x 1.75	1.75	1.55
6	X, V1 ø30270-160	270	-	160	30	24	21.75	16.5	40	8	195	11.0	17.5	10.0	3	195	22.5°	10	2	195	M10 x 1.50	1.75	1.55
	V0	-	330	-	30	-	21.75	16.5	40	12	300	M14	20	12.5	3	300	15°	12	4	300	M12 x 1.75	1.75	1.55
7	X, V1 ø360270-160	270	-	160	360	10	20.2	18	40	8	220	11.0	17.5	10.0	3	220	22.5°	10	2	220	M10 x 1.5	0.2	0.17
	V0	-	300	-	360	10	20.2	18	40	12	300	M14	20	12.5	3	300	15°	12	4	300	M12 x 1.75	0.2	0.17
8	X, V1 ø48335-220	335	-	220	48	24	25.75	20.5	48	12	258	13.0	20	12.0	3	258	15°	12	4	258	M12 x 1.75	1.75	1.55
	V0	-	400	-	48	-	25.75	20.5	48	12	360	13.0	20	12.5	3	360	15°	12	4	360	M12 x 1.75	1.75	1.55
9	X, V1 ø48425-300	425	-	300	48	28	26.75	21.5	50	12	335	13.0	20	12.0	3	335	15°	12	4	335	M12 x 1.75	1.75	1.55
	V0	-	482	-	48	-	26.75	21.5	50	12	450	13.0	20	12.5	3	450	15°	12	4	450	M12 x 1.75	1.75	1.55
10	X, V1 ø60425-3000	425	-	300	60	28	26.75	21.5	50	12	335	13.0	20	12.0	3	335	15°	12	4	335	M12 x 1.75	1.75	1.55
	V0	-	482	-	60	-	26.75	21.5	50	12	450	13.0	20	12.5	3	450	15°	12	4	450	M12 x 1.75	1.75	1.55
11	X, V1 ø72425-300	425	-	300	72	28	26.75	21.5	50	12	335	13.0	20	12.0	3	335	15°	12	4	335	M12 x 1.75	1.75	1.55
	V0	-	482	-	72	-	26.75	21.5	50	12	450	13.0	20	12.5	3	450	15°	12	4	450	M12 x 1.75	1.75	1.55
12	X, V1 ø360425-300	425	-	300	360	20	26	21.5	50	12	335	13.0	20	12.0	3	335	15°	12	4	335	M12 x 1.75	1	0.9
	V0	-	482	-	360	-	26	21.5	50	12	450	13.0	20	12.5	3	450	15°	12	4	450	M12 x 1.75	1	0.9
13	X, V1 ø48540-415	540	-	415	48	32	29.25	24.0	55	12	450	13.0	20	12.0	3	450	15°	12	4	450	M12 x 1.75	1.75	1.55
	V0	-	604	-	48	-	29.25	24.0	55	12	570	17.0	26	16.5	3	570	15°	12	4	570	M12 x 1.75	1.75	1.55
14	X, V1 ø60540-415	540	-	415	60	32	29.25	24.0	55	12	450	13.0	20	12.0	3	450	15°	12	4	450	M12 x 1.75	1.75	1.55
	V0	-	604	-	60	-	29.25	24.0	55	12	570	17.0	26	16.5	3	570	15°	12	4	570	M12 x 1.75	1.75	1.55
15	X, V1 ø72540-415	540	-	415	72	32	29.25	24.0	55	12	450	13.0	20	12.0	3	450	15°	12	4	450	M12 x 1.75	1.75	1.55
	V0	-	604	-	72	-	29.25	24.0	55	12	570	17.0	26	16.5	3	570	15°	12	4	570	M12 x 1.75	1.75	1.55
16	X, V1 ø360540-415	540	-	415	360	24	29	24.0	55	12	450	13.0	20	12.0	3	450	15°	12	2	450	M12 x 1.75	1.5	1.4
	V0	-	604	-	360	-	29	24.0	55	12	570	17.0	26	16.5	3	570	15°	12	2	570	M12 x 1.75	1.5	1.4



2 PCS HIRTH COUPLING

DIMENSION



NO.	Model No.	Outside DIA.		Number of teeth	Teeth profile	Teeth thickness of teeth	Inside thickness	Total thickness	Fixed bolt hole			Positioning pin hole		Withdraw bolt hole		Pitch of top end	Advances of pitch top end						
		D ₁	D ₂						N	F	H	H ₁	H ₂	H ₃	Number of holes			d ₁ U ₁ D ₁	Hole DIA.	Top DIA.	Depth of hole	Number of pin hole	d ₂ U ₂ D ₂
1	24080-44XV	80	79	44	24	8	15.30	12.0	29	6	60	M8	11.0	8.8	4	55	30°	ø2	6	60	M8 x 1.25	2	1.8
2	20100-40XV	100	98	40	20	9	18.37	14.0	34	6	60	8.8	11.0	6.0	3	60	30°	ø2	2	60	M8 x 1.25	1.37	1.22
3	24100-40XV	100	98	40	24	8	18.30	14.0	34	6	60	8.8	11.0	6.0	3	60	30°	ø2	2	60	M8 x 1.25	1.3	1.15
4	24120-60XV	120	118	60	24	8	18.30	14.0	34	6	80	6.6	11.0	6.0	4	60	30°	ø2	2	80	M8 x 1.25	1.3	1.15
5	30120-60XV	120	118	60	30	7	19.3	14.0	34	6	80	6.6	11.0	6.0	4	60	30°	ø2	2	80	M8 x 1.25	2.3	2
6	36140-80XV	140	138	80	36	11	18.52	14.0	34	6	100	6.6	11.0	6.0	3	100	30°	ø2	2	100	M8 x 1.25	2.5	2.2
7	24160-100XY	160	158	100	24	9	21.73	16.5	40	8	118	9.0	14.0	8.0	4	118	22.5°	ø2	2	118	M8 x 1.25	2.5	2.3
8	24180-120XV	180	178	120	24	9	21.61	16.5	40	8	140	9.0	14.0	8.0	3	140	22.5°	ø2	2	140	M8 x 1.25	1.61	1.44
9	36180-120XV	180	178	120	36	9	21.37	16.5	40	8	140	9.0	14.0	8.0	3	140	22.5°	ø2	2	140	M8 x 1.25	1.37	1.22
10	40180-120XV	180	178	120	40	9	21.76	16.5	40	8	140	9.0	14.0	8.0	3	140	22.5°	ø2	2	140	M8 x 1.25	1.76	1.57
11	24200-120XV	200	198	120	24	9	21.63	16.5	40	8	150	9.0	14.0	8.0	4	150	22.5°	ø2	2	150	M8 x 1.25	1.63	1.45
12	36200-120XV	200	198	120	36	11	21.52	16.5	40	8	150	9.0	14.0	8.0	3	150	22.5°	ø2	2	150	M8 x 1.25	1.52	1.36
13	72200-120XV	200	198	120	72	9	20.99	16.5	40	8	150	9.0	14.0	8.0	3	150	22.5°	ø2	2	150	M8 x 1.25	0.99	0.89
14	48210-135XV	210	208	135	48	13	21.71	16.5	40	12	165	9.0	14.0	8.0	3	158	15°	ø2	2	165	M8 x 1.25	1.71	1.53
15	60250-160XV	250	248	160	60	9	21.63	16.5	40	8	195	11.0	17.5	10.0	3	195	22.5°	ø2	2	195	M10 x 1.50	1.63	1.45
16	72250-160XV	250	248	160	72	11	21.42	16.5	40	8	195	11.0	17.5	10.0	3	195	22.5°	ø2	2	195	M10 x 1.50	1.42	1.27
17	360250-160XV	250	248	160	360	7	20.5	16.5	40	8	195	11.0	17.5	10.0	3	195	22.5°	ø2	2	195	M10 x 1.5	0.5	0.4
18	72280-190XV	280	278	190	72	11	21.42	16.5	40	8	222	13.0	20.0	12.0	3	222	22.5°	ø2	2	222	M10 x 1.50	1.42	1.27
19	360280-190XV	280	278	190	360	8	20.6	16.5	40	8	222	13.0	20.0	12.0	4	222	22.5°	ø2	2	222	M10 x 1.5	0.6	0.5
20	60320-210XV	320	318	210	60	11	30.48	25.5	58	10	258	13.0	20.0	12.0	4	258	18°	ø2	4	258	M12 x 1.75	1.46	1.30
21	72320-210XV	320	318	210	72	11	30.74	25.5	58	12	258	13.0	20.0	12.0	3	258	15°	ø2	4	258	M12 x 1.75	1.74	1.55
22	360320-210XV	320	318	210	360	9	29.6	25.5	58	12	258	13.0	20.0	12.0	3	258	15°	ø2	4	258	M12 x 1.75	0.6	0.5
23	48400-280XV	400	398	280	48	13	31.52	26.0	60	12	335	13.0	20.0	12.0	3	335	15°	ø2	4	335	M12 x 1.75	1.52	1.36
24	60400-280XV	400	398	280	60	15	31.82	26.0	60	12	335	13.0	20.0	12.0	3	335	15°	ø2	4	335	M12 x 1.75	1.82	1.62
25	72400-280XV	400	398	280	72	13	31.52	26.0	60	12	335	13.0	20.0	12.0	3	335	15°	ø2	4	335	M12 x 1.75	1.52	1.36
26	360400-280XV	400	398	280	360	13	30.6	26.0	60	12	335	13.0	20.0	12.0	3	335	15°	ø2	4	335	M12 x 1.75	0.6	0.5
27	48520-415XV	520	518	415	48	15	31.97	26.0	60	12	450	13.0	20.0	12.0	3	450	15°	ø2	4	450	M12 x 1.75	1.97	1.76
28	72520-415XV	520	518	415	72	15	31.97	26.0	60	12	450	13.0	20.0	12.0	3	450	15°	ø2	4	450	M12 x 1.75	1.97	1.76
29	360520-415XV	520	518	415	360	15	30.8	26.0	60	12	450	13.0	20.0	12.0	3	450	15°	ø2	4	450	M12 x 1.75	0.8	0.7
30	60600-480XV	600	598	480	60	15	36.95	29.0	70	12	530	17.0	26.0	16.0	4	530	15°	ø2	4	530	M12 x 1.75	1.95	1.74
31	72600-480XV	600	598	480	72	19	37.28	29.0	70	12	530	17.0	26.0	16.0	3	530	15°	ø2	4	530	M12 x 1.75	2.28	2.04
32	360600-480XV	600	598	480	360	15	36	29.0	70	12	530	17.0	26.0	16.0	3	530	15°	ø2	4	530	M12 x 1.75	1	0.9
33	72700-560XV	700	698	560	72	19	36.70	29.0	70	12	610	17.0	26.0	16.0	3	610	15°	ø2	4	610	M12 x 1.75	1.70	1.50
34	360700-560XV	700	698	560	360	19	36	29.0	70	12	610	17.0	26.0	16.0	3	610	15°	ø2	4	610	M12 x 1.75	1	0.9
35	721000-830XV	1000	998	830	72	22	61.70	54.5	120	18	900	17.0	26.0	16.0	4	900	10°	-	4	900	M12 x 1.75	1.70	1.50
36	3601000-830XV	1000	998	830	360	22	61.5	54.5	120	18	900	17.0	26.0	16.0	4	900	10°	-	4	900	M12 x 1.75	1.5	1.4
37	721200-1000XV	1200	1198	1000	72	22	71.70	64.5	140	20	1080	21.0	32.0	20.0	4	1080	9°	-	4	1080	M16 x 2.00	1.70	1.50
38	3601200-1000XV	1200	1198	1000	360	22	71.6	64.5	140	20	1080	21.0	32.0	20.0	4	1080	9°	-	4	1080	M16 x 2.00	1.6	1.5

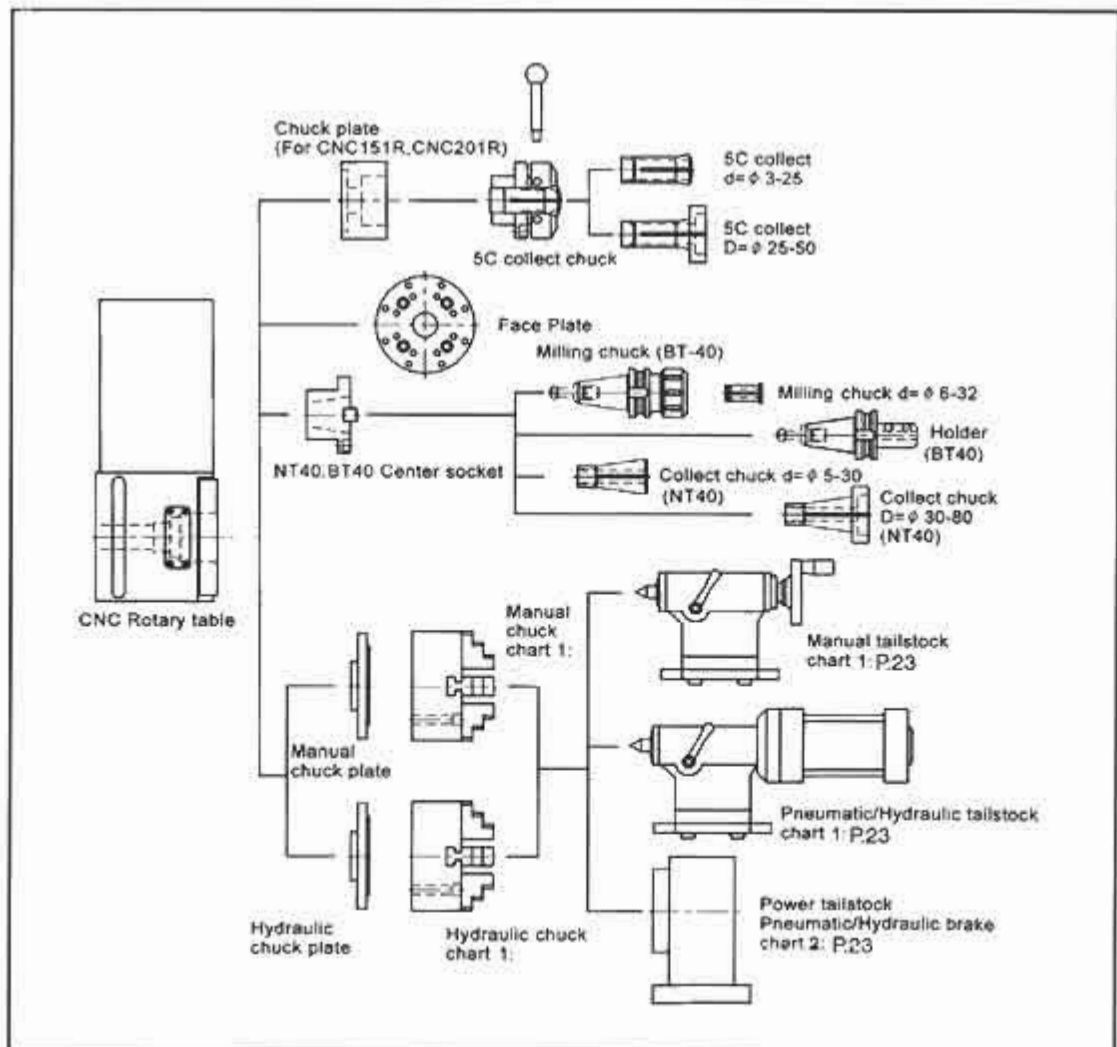
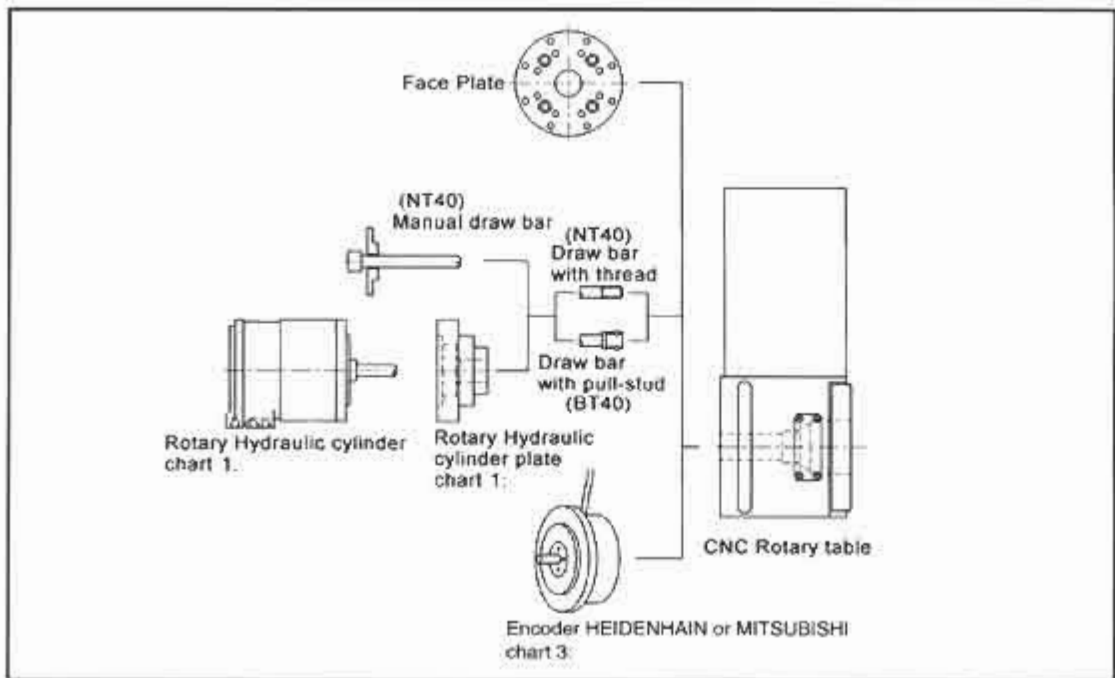


Chart 1

Suitable Rotary Table		CNC-101R	CNC-151R	CNC-201R	CNC-251R	CNC-321R	CNC-321RV	CNC-401RV	CNC-501RV	CNC-631RV	CNC-801RV
Manual Scroll chuck	Model No.	SC-4	SC-6	SC-7	SC-8	SC-10	SC-10	SC-12	SC-12	SC-12 or SC-15	SC-12 or SC-15
	Size	4"	6"	7"	8"	10"	10"	12"	12"	12" or 15"	12" or 15"
Hydraulic chuck plate	Model No.		V-206	V-206	V-208	V-210	V-210	V-212	V-212	V-212 or V-215	V-212 or V-215
	Size		6"	6"	8"	10"	10"	12"	12"	12" or 15"	12" or 15"
Rotary Hydraulic cylinder	Model No.		MH100	MH100	MH125	MH125	MH125	MH150	MH150	MH200	MH200
Tailstock Type	Manual	TSA-101	TSA-530	TSA-530	TSA-728	TSA-826	TSA-826	TSA-984	TSA-1220	TSA-1575	TSA-1890
	Pneumatic	TSA-101P	TSA-530P	TSA-530P	TSA-728P	TSA-826P	TSA-826P	TSA-984P	TSA-1220P	TSA-1575P	TSA-1890P
	Hydraulic	TSA-101H	TSA-530H	TSA-530H	TSA-728H	TSA-826H	TSA-826H	TSA-984H	TSA-1220H	TSA-1575H	TSA-1890H

Chart 2

Power tailstock	Table Size	Suitable Rotary Table
TSA-251S	ø250	CNC-251R-CNC-501RV

Chart 3

Suitable Rotary Table	Encoder		$\pm 5''$		$\pm 2''$		$\pm 1''$	
	CNC-101R	ROD 250 EXE 610B	RON 255 EXE 610B	_____		_____		_____
CNC-151R, 201R, 251R, 321R 321RV, 401RV, 501RV, 631RV, 801RV	ROD 250 EXE 610B	RON 255 EXE 610B	ROD 700 EXE 610B	RON 706 EXE 610B	ROD 800 EXE 702B	RON 806 EXE 702B	_____	
CNCT-202, CNCT-321 CNCT-451, CNCT-631	ROD 250 EXE 610B	RON 255 EXE 610B	ROD 700 EXE 610B	RON 706 EXE 610B	ROD 800 EXE 702B	RON 806 EXE 702B	_____	

Chart 4

Suitable Rotary Table	Control Brand / Suitable Motor	Siemens 810D, 840D	Heidenhain 410, 426
CNC-101R, 151R, 201R, 251R		1FK-6060, 1FK-6063, 1FT-6051	QSY-1A, QSY-1C
CNC-321R(RV)		1FT-6064	QSY-1E
CNC-401RV, 501RV		1FT-6082	QSY-1E
CNC-631RV, 801RV		1FT-6096	QSY-2E



CNC-151R + PTSA-530 (Power Tallstock Hydraulic)
Application: Vertical Machining Center



HT-630 + CNC Horizontal Boring / Milling M/C



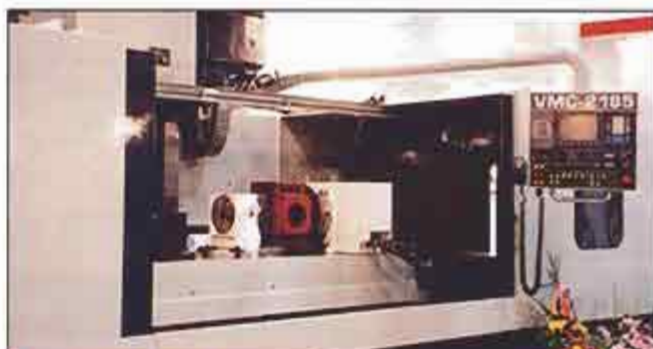
CNC-321R + TSA-826 (Tallstock)
Application: Vertical Machining Center



CNCMT-321 + SUPER II
Application: EDM electric discharge machine



CNC-801RV + TURBO-MATE
Application: Horizontal Machining center or conventional machine



NCF-400 + TSA-251S (Special tallstock + 4 faces fixture plate)
Application: Vertical / Horizontal machining center



CNC-631RV + CNC-401RV
Application: Horizontal Machining center or conventional machine



GCT-1400 + Deep hole drilling M/C
Application: High accuracy deep hole drilling



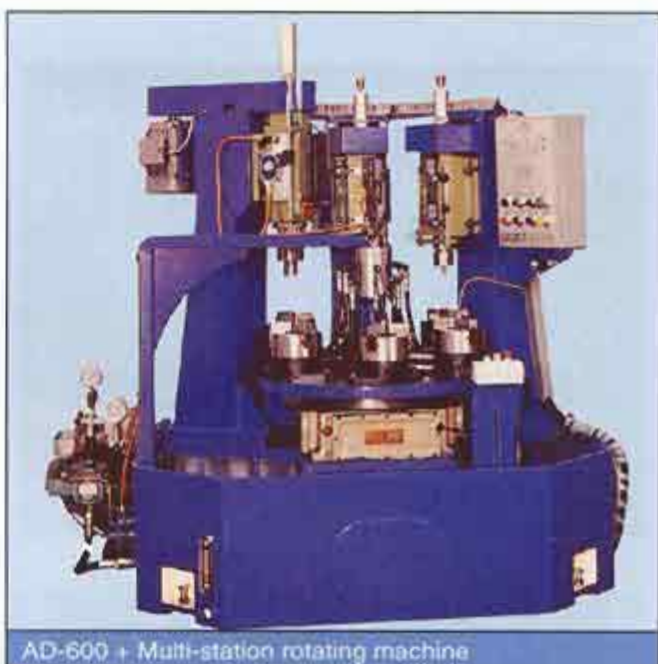
CNCT-201 + Vertical Machining Center



GCT-1200 + Horizontal Machining Center



AD-600-4D + Horizontal Machining Center



AD-600 + Multi-station rotating machine



CNC-1500RV + Horizontal Machining Center



CNCT-202 + Vertical Machining Center



CNCMT-401 + SUPER II
Application: EDM electric discharge machine



NCF-400 + TSA-251S (Tailstock)
Application: Vertical / Horizontal machining center



CNC-321R
Application: Vertical / Horizontal machining center



CNC-631RV
Application: Vertical / Horizontal machining center



CNC-401RV + TSA-251S
Application: Vertical machining center



CNC-1500RV + G MATE C CONTROLLER
Application: Horizontal machining center



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TEL : 886-4-253 66 999 (Rep.) FAX : 886-4-2536 1111 (Rep.)

E-MAIL : goldensn@ms7.hinet.net

<http://goldensun.com.tw>