

EXACT MACHINERY CO.,LTD

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EXACT MACHINERY CO.,LTD



Dual lead worm Gear Type

4 ERT

CNC Tilting Rotary Table

(2 Axes motor drive with dual lead worm transmission 0.001 increment)

• ERT-250 • ERT-350 • ERT-500



6 TRT

Tilting Rotary Table

(2 Axes motor drive with dual lead worm transmission 0.001 increment)

• TRT-100 • TRT-170 • TRT-250 • TRT-320 • TRT-450



8 NCT-T

Manual Tilting CNC Rotary Table

(Manual tilting Motor drive with dual lead worm transmission 0.001 increment)

• NCT-280T • NCT-320T • NCT400T



10 NCT

CNC Rotary Table

(Motor drive with dual lead worm transmission 0.001 increment)

• NCT-125R (L) • NCT-170R (L) • NCT-200R (L) • NCT-250R (L)
• NCT-320RV (LV) • NCT-400RV • NCT-500RV • NCT-630RV
• NCT-800RV • NCT-1000R



14 NCT-RB

CNC Rotary Table with motor back mounted

(Motor drive with dual lead worm transmission 0.001 increment)

• NCT-125RB • NCT-170RB • NCT-200RB • NCT-250RB



16 NCT-TN

CNC Multi Spindle Rotary Table

(Motor drive with dual lead worm transmission 0.001 increment)

• NCT-125R-T2, T3, T4 • NCT-170R-T2, T3 • NCT-200R-T2
• NCT-250R-T2



25 NCT-HB

CNC Horizontal Hydraulic Rotary Table

(Motor drive with dual lead worm transmission 0.001 increment)

• NCT-1000HB • NCT-1400HB • NCT-1800HB



Birth Coupling Gear Type

20 HC

CNC Hydraulic Coupling Gear Index Table

(Motor drive Non-lifting vertical/horizontal coupling Gear indexing tables / 20T/3000)

• HC-200R • HC-250R • HC-320RV • HC-400RV • HC-500RV



22 HC-H

CNC Hydraulic Horizontal coupling Gear Index Table

(Motor drive Non-lifting horizontal coupling Gear indexing tables / 20T/3000)

• HC-450H • HC-600H • HC-800H



24 HC-HB

Non-lifting CNC Horizontal Hydraulic coupling Gear Index Table

(Motor drive Non-lifting horizontal coupling Gear indexing tables / 20T/3000)

• HC-1000HB • HC-1400HB • HC-1800HB



28 CT

Horizontal Hydraulic Coupling Gear Index Table

(Non-lifting horizontal coupling Gear indexing tables)

• CT-200 • CT-340 • CT-470 • CT-600 • CT-800
• CT-470A • CT-600A



32 CT-V

Vertical Hydraulic Coupling gear index Table

(Non-lifting vertical coupling gear indexing tables)

• CT-200V • CT-250V • CT-320V



34 CT-W

(Non-lifting) Built-in Type Hydraulic coupling Gear Index Table

(Non-lifting built-in type coupling gear indexing tables)

• CT-450WS • CT-600WS



36 MBT

Manual Coupling Gear Index Table with Pneumatic clamping

(2 Pieces Birth coupling Gear lifting indexing tables / 20T/3000)

• MBT-450 • MBT-600 • MBT-800 • MBT-1000 • MBT-1200



Tailstock

TAILSTOCK

Manual Tailstock (Manual Tailstock)

• MTS-110 • MTS-135 • MTS-170 • MTS-B-210
• MTS-B-230 • MTS-B-250 • MTS-B-310 • MTS-B-400



38 Auto Tailstock

(Hydraulic or Pneumatic Tailstock)

• ATS-110 • ATS-135 • ATS-170 • ATS-B-210
• ATS-B-230 • ATS-B-250 • ATS-B-310 • ATS-B-400



Support Tailstock with Hydraulic clamping

(Hydraulic heavy-duty with integral brake/clamp system)

• BTS-125 • BTS-170 • BTS-200 • BTS-250 • BTS-320
• BTS-400



EDS

41 EDS

NC Rotary table with Built-in servomotor (Direct drive system)

(Direct drive system with built-in Fuxin servomotor)

• EDS-400



Accessories

42 DNS

AC digital individual controller

(AC individual controller with M code connection with MaxMotion)

• DNS106 • DNS110 • DNS120 • DNS135



44 Birth coupling

(Birth coupling Gear 2 pieces and 3 pieces type)



46 Accessories

Sanable Motor type, 3-gear Motor (power clutch with sub-plate, encoder and PLC unit)



NOTE: The information contained in this product catalogue is based on detail available at the time of printing. EXACT reserves the right to make changes arising from constant product development without advance notice.



Innovation, Quality, Professional

EXACT Machinery Co., Ltd.

is manufacturer, it develops and produces stable and quality goods with extremely precise CMC (ring table, Rotary table, indexing table, auto pallet changer (APC) and various kind of dividing systems for lots of demand in machine tools, metal working, high-tech and automobile industries along with sanitary equipment, modern bathroom facilities and domestic appliances all around the world for more than fifteen years.

Nowadays, EXACT Machinery is a professional worldwide supplier with a distribution network committed to complete customer satisfaction along with a strong solid technological R/D foundation. EXACT products are offering economical and accurate for precision inspection, machining parts and various applications with high efficiency.



Zeiss 3D measuring machine



Optical Auto-Collimator



Surface Roughness Measuring Instrument



Hardness Tester Instrument



Agilent Laser Angular Position Measurement System



EXACT MACHINERY CO.,LTD



TRT



NCT

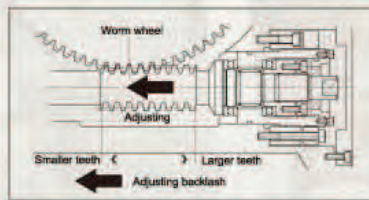


NCT-T

HIGH ACCURACY

Dual Lead Worm Gear System

The dual lead worm is a one-piece unit that is more rugged and accurate than the conventional split worm gear used by many other builders and provides a smooth uninterrupted motion, easier adjustment for backlash and requires minimum maintenance.

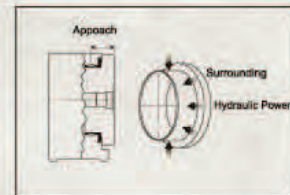


HEAVY DUTY CUTTING TOLERANCE

Hydraulic Swelling Surrounding Clamping System

When performing static cutting operations, the Rotary Table is held rigidly in place by an integral hydraulic brake assembly with a massive contact area, the clamping position is much closer with faceplate for better performs.

This distortion-free brake is operated by hydraulics from the machine, an optional mini hydraulic power unit or it can be used by pneumatic source with optional an air/oil intensifier (PHC booster).





ERT

CNC Tiltng Rotary Table

2 Axes motor driver with dual lead worm transmission
 0.001 increment Continue type
 Hydraulic clamping system (PHC booster available)
 Wider tilting angle for better working



Model		ERT-250	ERT-350	ERT-500			
Table Diameter	(mm)	φ250	φ350	φ500			
Table Center Hole Diameter	(mm)	φ70 ^{HT}	φ100 ^{HT}	φ200 ^{HT}			
Table Center Through Hole Diameter	(mm)	φ50	φ60	φ170			
Table Horizontal Position Height	(mm)	315	390	520			
Table T-Slot Width	(mm)	12 ^{HT}	14 ^{HT}	18 ^{HT}			
Standard guide block width	(mm)	14 ^{HT}	18 ^{HT}	18 ^{HT}			
Pressure of clamp system	(kg/cm ²)	35 by Hyd.	35 by Hyd.	35 by Hyd.			
Axis		Rotary	Tilting	Rotary	Tilting	Rotary	Tilting
Minimum Input Increment	(degree)	0.001 [*]	0.001 [*]	0.001 [*]	0.001 [*]	0.001 [*]	0.001 [*]
Total speed (Motor 2000rpm)	Rotation Speed (r.p.m.)	16.6	11.1	16.6	11.1	11.1	5.5
	Gear Ratio	1 / 120	1 / 180	1 / 120	1 / 180	1 / 180	1 / 360
Servo Motor (Optional)	FANUC	α-IP8	α-IP8	α-IP8	α-IP12	α-IP12	α-IP22
	MITSUBISHI	HF104T	HF104T	HF104T	HF204S	HF204S	HF354S
	SIEMENS	1FK7063	1FK7063	1FK7063	1FK7083	1FK7083	1FK7161
Rotation torque	(kgf·m)	82	102	200	200	240	240
Indexing accuracy (accumulative)	(sec)	30 [*]	45 [*]	20 [*]	45 [*]	15 [*]	90 [*]
Repetitive accuracy	(sec)	± 2 [*]	± 2 [*]	± 2 [*]	± 2 [*]	± 2 [*]	± 2 [*]
Tilting angle of Tilting axis (Horizontal = 0°)		-20°→+110°		-20°→+110°		-20°→+110°	
Clamping Torque	F (kgf)	1000	1500	2300			
	F x L (kgf·m)	82	200	350			
	F x L (kgf·m)	102	200	710			
Load Capacity	0° (kg)	120	150	500			
	0-90° (kg)	70	100	300			
Movable load for tilting moment	W x L (kgf·m)	5	15	51			
Weight	Net (kg)	900	1200	2500			

* We reserve the right to make changes arising from constant product development without advance notice.
 * The list of fitting servomotor, please refer to page 43.

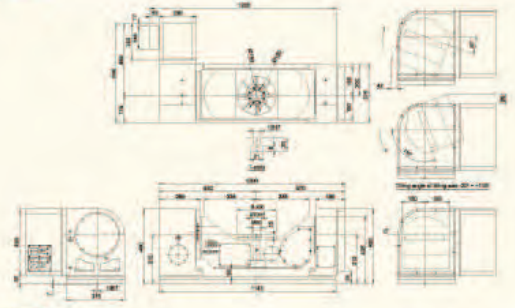
Standard accessories

Block nuts	Hangers
☐	☐

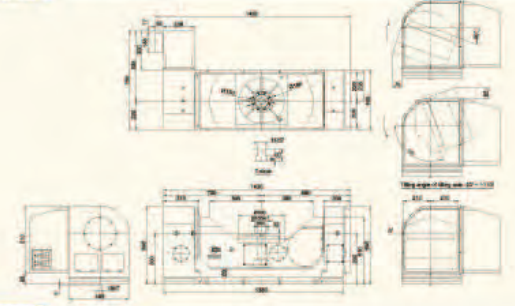
Optional accessories

DNS controller	Tailstock		3-jaw chuck with sub plate	Encoder	PHC x 2
	Taper	Support			
* (p.42)	* (p.38)	* (p.40)	* (p.46)	* (p.46)	* (p.46)

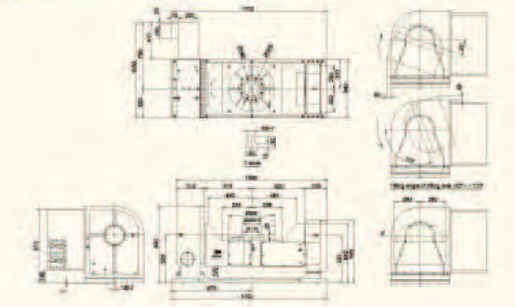
ERT-250



ERT-350



ERT-500





TRT CNC Tilting Rotary Table

2 Axes motor driver with dual lead worm transmission
0.001 increment Continue type
Hydraulic clamping system (PHC booster available)
Wider tilting angle for better working.



Model		TRT-100	TRT-170	TRT-250	TRT-320	TRT-450					
Table Diameter	(mm)	φ115	φ170	φ250	φ320	φ450					
Table Center Hole Diameter	(mm)	φ55 ^{HT}	φ35 ^{HT}	φ50 ^{HT}	φ60 ^{HT}	φ60 ^{HT}					
Table Center Through Hole Diameter	(mm)	φ35	φ25	φ40	φ46	φ51					
Table Horizontal Position Height	(mm)	190	260	320	335	435					
Table Overall Height at 90° tilted	(mm)	255	315	382	448	598					
Table Center Height at 90° tilted	(mm)	135	190	230	255	335					
Table T-Slot Width	(mm)	x	12 ^{HT}	12 ^{HT}	14 ^{HT}	14 ^{HT}					
Standard guide block width	(mm)	14 ^{HT}	18 ^{HT}	18 ^{HT}	18 ^{HT}	18 ^{HT}					
Pressure of clamp system	(kg/cm ²)	5 by Air	35 by Hyd.	35 by Hyd.	35 by Hyd.	35 by Hyd.					
Axis		Rotary	Tilting	Rotary	Tilting	Rotary	Tilting				
Minimum input increment	(degree)	0.001°	0.001°	0.001°	0.001°	0.001°	0.001°				
Total speed (Motor 2000rpm)	Rotation Speed (r.p.m.)	33.3	16.6	5.5	5.5	5.5	5.5	11.1	5.5		
	Gear Ratio	1/60	1/120	1/360	1/360	1/360	1/360	1/180	1/360		
Servo Motor (Optional)	FANUC	αIF2	αIF2	αIF2	αIF8	αIF8	αIF8	αIF12	αIF12		
	MITSUBISHI	MF-75T	MF-75T	MF-75T	MF-104T	MF-104T	MF-104T	MF-204S	MF-204S		
	SIEMENS	1FK7042	1FK7042	1FK7042	1FK7063	1FK7063	1FK7063	1FK7083	1FK7083		
Rotation torque	(kgf-m)	8.5	8.5	16	16	47	47	78	78	170	170
Indexing accuracy (accumulative)	(sec)	40°	80°	20°	60°	15°	60°	15°	60°	15°	60°
Repetitive accuracy	(sec)	±2"	±2"	±2"	±2"	±2"	±2"	±2"	±2"	±2"	±2"
Tilting angle of TDR axis (Horizontal = 0°)		17°~110°	110°~110°	110°~110°	110°~110°	110°~110°	110°~110°	110°~110°	110°~110°		
Clamping Torque	F	(kgf)	350	300	900	1800	2500				
	F x L	(kgf-m)	15	17	50	85	180				
	F x L	(kgf-m)	15	17	50	100	180				
Load Capacity	0°	(kg)	40	50	100	150	250				
	0°~90°	(kg)	25	35	50	100	150				
Movable load for tilting moment	W x L	(kgf-m)	3	8	16	25	30				
Weight	Net	(kg)	105	180	340	500	900				

* We reserve the right to make changes arising from constant product development without advance notice.
* The list of fitting servomotor, please refer to page 43.

Standard accessories

Block nuts	Hangers
⊖	⊕

Optional accessories

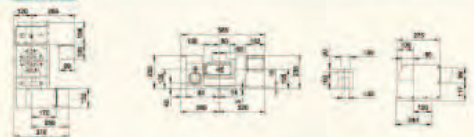
DNS controller	Tailstock		3-jaw chuck with sub plate	Encoder	PHC x 2
	Taper	Support			
* (p.42)	* (p.38)	* (p.40)	* (p.46)	* (p.46)	* (p.46)

Guaranteed inspection accuracy

	1	2	3	4	5	6
1						

NO	Inspection items	TRT-100	TRT-170	TRT-250	TRT-320	TRT-450
1	Table flatness	Per overall length 0.01	0.01	0.01	0.01	0.01
2	Table run out	0.01	0.01	0.01	0.01	0.01
3	Parallelism of table top to frame bottom	Per overall length 0.02	0.02	0.02	0.02	0.02
4	Parallelism of table top to frame bottom	Per overall length 0.02	0.02	0.02	0.02	0.02
5	Concentricity of center hole	0.01	0.01	0.01	0.01	0.01
6	Parallelism of table top to frame bottom guide blocks	Per overall length 0.02	0.02	0.02	0.02	0.02

TRT-100



TRT-170



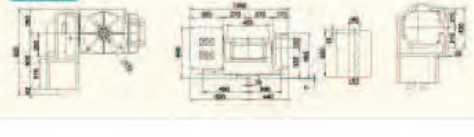
TRT-250



TRT-320



TRT-450



NCT-T

Manual Tilting CNC Rotary Table

Motor driver with dual lead worm transmission
 0.001 increment Continuous type for Rotary axis,
 Manual tilting type for tilting axis,
 Hydraulic clamping system (PhC Booster available)
 Tilting angle 0°~+100 degrees



Model		NCT-250T		NCT-320T		NCT-400T	
Table Diameter	(mm)	φ250		φ320		φ400	
Table Center Hole Diameter	(mm)	φ50 ^{H7}		φ60 ^{H7}		φ60 ^{H7}	
Table Center Through Hole Diameter	(mm)	φ40		φ46		φ51	
Table Horizontal Position Height	(mm)	295		335		365	
Table Overall Height at 90° tilted	(mm)	450		604		697	
Table Center Height at 90° tilted	(mm)	215		265		290	
Table T-Slot Width	(mm)	12 ^{H7}		14 ^{H7}		14 ^{H7}	
Standard guide block width	(mm)	18 ^{H7}		18 ^{H7}		18 ^{H7}	
Hydraulic Pressure	(kg/cm ²)	35 by Hyd.		35 by Hyd.		35 by Hyd.	
Axis		Rotary	Tilting	Rotary	Tilting	Rotary	Tilting
Minimum Input increment	(degree)	0.001*	0.08 ^{H7}	0.001*	0.01 ^{H7}	0.001*	0.01 ^{H7}
Total speed (Motor 2000rpm)	Rotation Speed (r.p.m.)	16.6	X	16.6	X	11.1	X
	Gear Ratio	1 / 120	1 / 40	1 / 120	1 / 90	1 / 180	1 / 90
Servo Motor (Optional)	FANUC	αIF8	Manual	αIF12	Manual	αIF12	Manual
	MITSUBISHI	HF-104T	Manual	HF-204S	Manual	HF-204S	Manual
	SIEMENS	1FK7063	Manual	1FK7083	Manual	1FK7083	Manual
Rotation torque	(kgf·m)	42		78		170	
Rotary Axis indexing accuracy	(sec)	15"		15"		15"	
Rotary Axis Repetitive accuracy	(sec)	± 2"		± 2"		± 2"	
Tilting Axis angle range	(Horizontal = 0°)	0°~+100°		0°~+100°		0°~+100°	
Clamping Torque	F	(kgf)	1400	1700	2000		
	F x L	(kgf·m)	50	85	180		
	F x L	(kgf·m)	85	110	180		
Load Capacity	0°	(kg)	250	350	500		
	90°	(kg)	100	150	200		
Weight	Net	(kg)	250	360	450		

* We reserve the right to make changes arising from constant product development without advance notice.
 * The list of fitting servomotor, please refer to page 43.

Standard accessories

Block nuts	Hangers
☉	☉

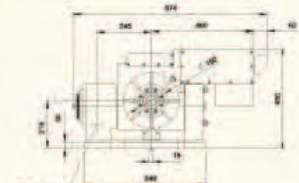
Optional accessories

DNS controller	Tailstock		3-jaw chuck with sub plate	Encoder	PhC
	Taper	Support			
* (p.42)	* (p.38)	* (p.40)	* (p.46)	* (p.45)	* (p.46)

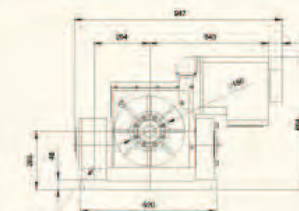


※The better structure to cover over worm set inside.

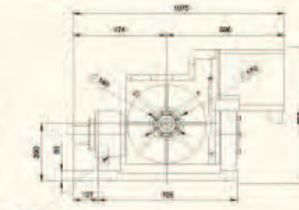
NCT-250T



NCT-320T



NCT-400T



NCT

CNC Rotary Table

Motor driver with dual lead worm transmission
0.001 increment Continue type
Hydraulic clamping system (PHC booster available)

※ Full series can be horizontal and vertical position



Model		NCT-125R(L)	NCT-170R(L)	NCT-200R(L)	NCT-250R(L)	NCT-320RV	
Table Diameter	(mm)	φ125	φ170	φ200	φ250	φ320	
Table Center Hole Diameter	(mm)	φ40 [※]	φ50 [※]	φ60 [※]	φ50 [※]	φ60 [※] / φ110	
Table Center Through Hole Diameter	(mm)	φ25	φ30	φ40	φ40	φ46 / φ100	
Horizontal Position Height	(mm)	150	190	195	200	230	
Center Height of Vertical Position	(mm)	110	135	135	170	210	
Table T-Slot Width	(mm)	12 [※]	12 [※]	12 [※]	12 [※]	14 [※]	
Standard guide block width	(mm)	14 [※]	14 [※]	18 [※]	18 [※]	18 [※]	
Hydraulic Pressure	(kg/cm ²)	35 by Hyd.	35 by Hyd.	35 by Hyd.	35 by Hyd.	35 by Hyd.	
Minimum input increment	(degree)	0.001 [*]	0.001 [*]	0.001 [*]	0.001 [*]	0.001 [*]	
Total speed (Motor 2000rpm)	Rotation Speed	(r.p.m.)	22.2	22.2	22.2	16.6	16.6
	Gear Ratio		1 / 90	1 / 90	1 / 90	1 / 120	1 / 120
Servo Motor (Optional)	FANUC	α-IP2	α-IP4	α-IP4	α-IP8	α-IP12	
	MITSUBISHI	HF-75T	HF-54T	HF-54T	HF-104T	HF-204S	
	SIEMENS	1FK7042	1FK7060	1FK7060	1FK7063	1FK7083	
Rotation torque	(kgf-m)	12	16	23	48	78	
Indexing accuracy (accumulative)	(sec)	60 [*]	20 [*]	20 [*]	15 [*]	15 [*]	
Repetitive accuracy	(sec)	± 2 [*]	± 2 [*]	± 2 [*]	± 2 [*]	± 2 [*]	
Clamping Torque	F	(kgf)	600	800	1000	1400	1700
	F x L	(kgf-m)	15	17	24	50	85
	F x L	(kgf-m)	20	40	65	85	110
Load Capacity	0°	(kg)	100	150	200	250	350
	90°	(kg)	50	70	85	100	150
Weight	Net	(kg)	38	60	75	110	220

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* The list of fitting servomotor, please refer to page 43.

Standard accessories

Block nuts	Hangers
⊙	⊙

Optional accessories

DNS controller	Tailstock		3-jaw chuck with sub plate	Encoder	PHC
	Taper	Support			
* (p.42)	* (p.38)	* (p.40)	* (p.46)	* (p.46)	* (p.46)

NCT

CNC Rotary Table

Motor driver with dual lead worm transmission
0.001 increment Continue type
Hydraulic clamping system (PHC booster available)

※ Full series can be horizontal and vertical position



Model		NCT-400RV	NCT-500RV	NCT-630RV	NCT-800RV	NCT-1000R	
Table Diameter	(mm)	φ400	φ500	φ630	φ800	φ1000	
Table Center Hole Diameter	(mm)	φ60 [※] / φ155 [※]	φ170 [※]	φ210 [※]	φ250 [※]	φ305 [※]	
Table Center Through Hole Diameter	(mm)	φ51 [※] / φ150 [※]	φ170	φ210	φ254	φ260	
Horizontal Position Height	(mm)	250	300	329	380	430	
Center Height of Vertical Position	(mm)	250	310	400	480	650	
Table T-Slot Width	(mm)	14 [※]	18 [※]	18 [※]	22 [※]	22 [※]	
Standard guide block width	(mm)	18 [※]	18 [※]	18 [※]	22 [※]	22 [※]	
Hydraulic Pressure	(kg/cm ²)	35 by Hyd.	35 by Hyd.	35 by Hyd.	35 by Hyd.	35 by Hyd.	
Minimum input increment	(degree)	0.001 [*]	0.001 [*]	0.001 [*]	0.001 [*]	0.001 [*]	
Total speed (Motor 2000rpm)	Rotation Speed	(r.p.m.)	11.1	11.1	11.1	5.5	5.5
	Gear Ratio		1 / 180	1 / 180	1 / 180	1 / 360	1 / 360
Servo Motor (Optional)	FANUC	α-IP12	α-IP12	α-IP22	α-IP22	α-IP22	
	MITSUBISHI	HF-204S	HF-204S	HF-354S	HF-354S	HF-354S	
	SIEMENS	1FK7083	1FK7083	1FK7101	1FK7101	1FK7101	
Rotation torque	(kgf-m)	170	240	420	520	600	
Indexing accuracy (accumulative)	(sec)	15 [*]	15 [*]	15 [*]	15 [*]	15 [*]	
Repetitive accuracy	(sec)	± 2 [*]	± 2 [*]	± 2 [*]	± 2 [*]	± 2 [*]	
Clamping Torque	F	(kgf)	2000	2300	2600	2800	5800
	F x L	(kgf-m)	180	250	450	550	650
	F x L	(kgf-m)	180	250	400	700	1800
Load Capacity	0°	(kg)	500	600	800	1400	3000
	90°	(kg)	200	250	400	600	1200
Weight	Net	(kg)	300	450	820	1600	2800

* We reserve the right to make changes arising from constant product development without advance notice.
* The list of fitting servomotor, please refer to page 43.

Standard accessories

Block nuts	Hangers
⊙	⊙

Optional accessories

DNS controller	Tailstock		3-jaw chuck with sub plate	Encoder	PHC
	Taper	Support			
* (p.42)	* (p.38)	* (p.40)	* (p.46)	* (p.46)	* (p.46)

Guaranteed inspection accuracy

1	2	3	4	5	6	7

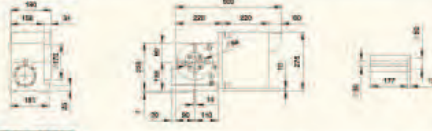
NO	Inspection items	NCT-125	NCT-170 NCT-200	NCT-250 NCT-320	NCT-400 NCT-500	NCT-630 NCT-1000
1	Concentricity of center hole	0.01	0.01	0.01	0.01	0.01
2	Perpendicularity of table with guide block	Per total table length		0.02	0.02	0.03
3	Height difference of both center lines of heavy table and table block	Per 300 mm length		0.02	0.02	0.02
4	Perpendicularity of table top to frame bottom	Per total table length		0.02	0.02	0.03
5	Table top flatness	Per total table length		0.015	0.015	0.02
6	Parallelism of table top to frame bottom	0.01	0.01	0.01	0.015	0.02
7	Parallelism between table surface and frame bottom face	Per total table length		0.02	0.02	0.03

NCT-125R



STEP 1

NCT-170R



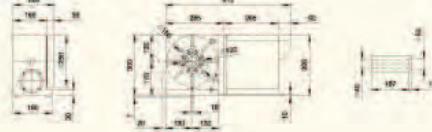
STEP 2

NCT-200R



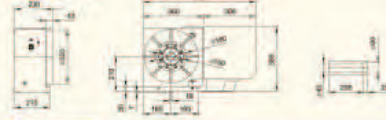
STEP 3

NCT-250R



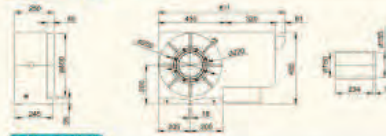
STEP 4

NCT-320RV



STEP 5

NCT-400RV



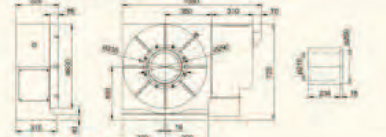
STEP 6

NCT-500RV



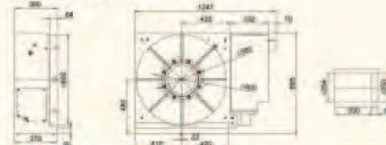
STEP 7

NCT-630RV



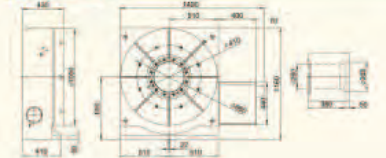
STEP 8

NCT-800RV



STEP 9

NCT-1000R



STEP 10

NCT-RB

CNC Rotary Table with motor mounted at back side

Motor driver with dual lead worm transmission
0.001 increment Continuous type
Hydraulic clamping system (PHC booster available)



Model		NCT-125RB	NCT-170RB	NCT-200RB	NCT-250RB	
Table Diameter	(mm)	φ125	φ170	φ200	φ250	
Table Center Hole Diameter	(mm)	φ40 ^{±0.01}	φ50 ^{±0.01}	φ60 ^{±0.01}	φ50 ^{±0.01}	
Table Center Through Hole Diameter	(mm)	φ25	φ30	φ40	φ40	
Center Height of Vertical Position	(mm)	110	135	135	170	
Table T-Slot Width	(mm)	12 ^{±0.01}	12 ^{±0.01}	12 ^{±0.01}	12 ^{±0.01}	
Standard guide block width	(mm)	14 ^{±0.01}	14 ^{±0.01}	18 ^{±0.01}	22 ^{±0.01}	
Hydraulic Pressure	(kg/cm ²)	35 by Hyd.	35 by Hyd.	35 by Hyd.	35 by Hyd.	
Minimum Input Increment	(degree)	0.001*	0.001*	0.001*	0.001*	
Total speed (Motor 2000rpm)	Rotation Speed (r.p.m.)	22.2	22.2	22.2	16.6	
	Gear Ratio	1 / 90	1 / 90	1 / 90	1 / 120	
Servo Motor (Optional)	FANUC	α-IP2	α-IP4	α-IP4	α-IP8	
	MITSUBISHI	MF-75T	MF-54T	MF-54T	MF-104T	
	SIEMENS	1FK7042	1FK7060	1FK7060	1FK7063	
Rotation torque	(kgf·m)	12	16	23	48	
Indexing accuracy (accumulative)	(sec)	60"	20"	20"	15"	
Repetitive accuracy	(sec)	± 2"	± 2"	± 2"	± 2"	
Clamping Torque	F	(kgf)	600	800	1000	1400
	F x L	(kgf·m)	13	17	24	50
	F x L	(kgf·m)	20	40	65	85
Load Capacity	0°	(kg)	100	150	200	250
	90°	(kg)	50	70	85	100
Weight	Net	(kg)	38	60	75	110

* We reserve the right to make changes arising from constant product development without advance notice.
* The list of fitting servomotor, please refer to page 43.

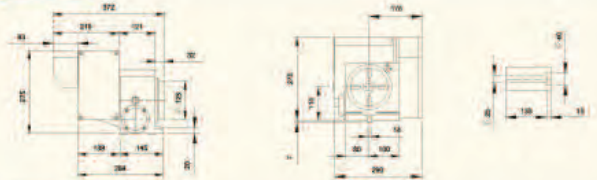
⊙ Standard accessories

Block nuts	Hangers
⊙	⊙

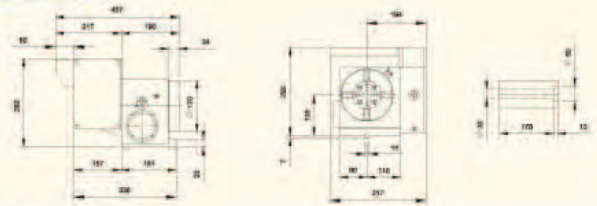
* Optional accessories

DNS controller	Tallstock	2-jaw chuck with sub plate	Encoder	PHC
	Taper			
* (p.42)	* (p.38)	* (p.40)	* (p.46)	* (p.46)

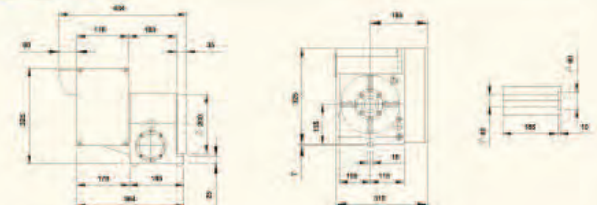
* NCT-125RB



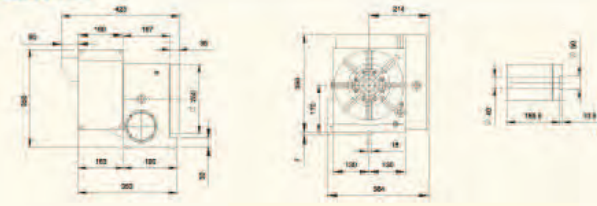
* NCT-170RB



* NCT-200RB



* NCT-250RB





Model	NCT-125R-T2/T3/T4	NCT-170R-T2/T3	NCT-200R-T2	NCT-250R-T2	
Table Diameter (mm)	φ125	φ170	φ200	φ250	
Table Center Hole Diameter (mm)	φ40 ST	φ50	φ50 ST	φ50 ST	
Table Center Through Hole Diameter (mm)	φ25	φ30	φ40	φ40	
Multi-Table Center Distance (mm)	150	200	250	300	
Horizontal Position Height (mm)	150	190	195	201	
Center Height of Vertical Position (mm)	110	135	135	170	
Table T-Slot Width (mm)	12 ST	12 ST	12 ST	12 ST	
Standard guide block width (mm)	18 ST	18 ST	18 ST	18 ST	
Hydraulic Pressure (kg/cm ²)	35 by Hyd.	35 by Hyd.	35 by Hyd.	35 by Hyd.	
Minimum input increment (degree)	0.001*	0.001*	0.001*	0.001*	
Total speed (Motor 2000rpm)	Rotation Speed (r.p.m.)	22.2	22.2	22.2	16.6
	Gear Ratio	1 / 90	1 / 90	1 / 90	1 / 120
Servo Motor (Optional)	FANUC	αi IFB/αi IFB	αi IFB	αi IFB	αi IFB
	MITSUBISHI	HF-547/HF-1041	HF-1041	HF-1041	HF-1047
	SIEMENS	1FK7060 / 1FK7063	1FK7063	1FK7063	1FK7063
Rotation torque (kgf-m)	12	16	23	48	
Indexing accuracy (accumulative) (sec)	60"	20"	20"	15"	
Repetitive accuracy (sec)	± 2"	± 2"	± 2"	± 2"	
Clamping Torque	F (kgf)	800	1000	1300	1400
	F x L (kgf-m)	17	24	30	50
	F x L (kgf-m)	20	40	80	85
Load Capacity	0° (kg)	100	150	200	250
	90° (kg)	50	70	85	100
Weight (kg)	Net T2 / T3 / T4	70 / 90 / 110	95 / 135	125	195

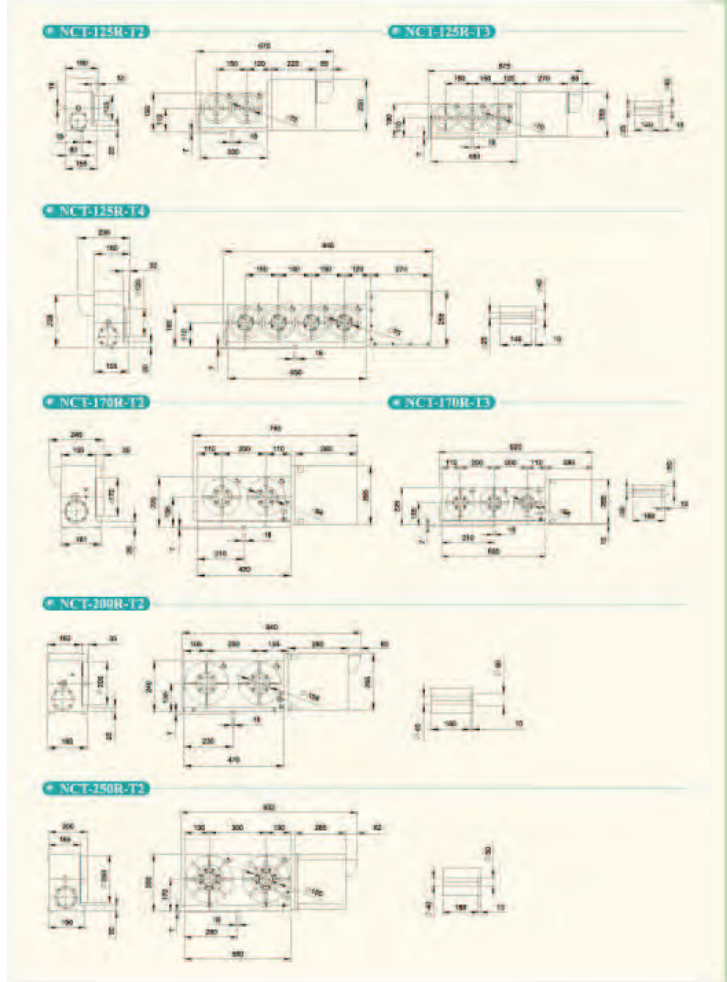
* We reserve the right to make changes arising from constant product development without advance notice.
 * The list of fitting servomotor, please refer to page 43.

Ⓢ Standard accessories

Block nuts	Hangers
Ⓢ	Ⓢ

+ Optional accessories

DNS controller	Tailstock		3 jaw chuck with sub plate	Encoder	PHC
	Taper	Support			
* (p.42)	* (p.38)	* (p.40)	* (p.46)	* (p.46)	* (p.46)





● Zeiss 3D Measuring machines

CNC Hydraulic Coupling Gear Index Table



We have designed several automation indexing tables for different purpose such as common type HC-R (RV) for both of vertical and horizontal used, horizontal type HC-H series for horizontal machine (table top with or without T-Slots), special purpose machine and so on. There are some multi spindle types of Hirth coupling gear type indexing table by special request to speed up your work for more choices.

We also have a lot of HC-H Series with APC combination, The entire range of standard automatic indexing tables are driving by servomotor with incorporate a non-lifting tabletop positioned by a three-piece Hirth coupling. HC series is a great designed of indexing table and different than continue type of NCT Series, if you're required much high accuracy with heavy-duty cutting but without helix works, it should be your best working device definitely.

HIGH ACCURACY

Dual Lead Worm Gear System with Servo driver

The dual lead worm is a one-piece unit that is more rugged and accurate than the conventional split worm gear used by many other builders and provides a smooth uninterrupted motion, easier adjustment for backlash and requires minimum maintenance. Table is driving by servomotor.



HEAVY DUTY CUTTING TOLERATION

Three Pieces of Hirth Coupling Gear clamping system and positioning

The positioning and accuracy are controlled by encoders from servo motors as well as a high precision three-pieces Hirth coupling. Material of Hirth coupling are processed with high treatment. The entire range incorporate a non-lifting table top, there are provided with high accuracy ± 4 arc second for standard frame, heavy-duty cutting, rigidity and durable.



● Agiled Laser Angular Position Measurement System



HC-H

Non-IRING CNC Horizontal Hydraulic clamping Table Index Table

Motor driver with dual lead worm transmission
 Built-in 3 pcs Hirth coupling,
 each every 1 or 5 degrees indexing (720 or 3600)
 Hydraulic clamping system, Hydraulic Pressure=35kg/cm²
 ■ Horizontal position only



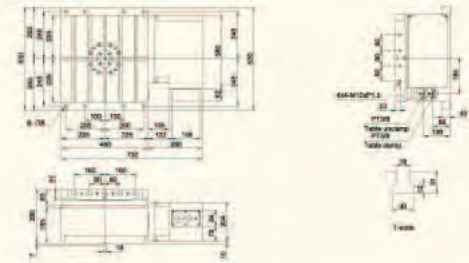
Model		HC-450H	HC-600H	HC-800H	
Table Plate size (LxW)	(mm)	450 x 450	600 x 600	800 x 800	
Table Center Hole Diameter	(mm)	φ50 ^{H7}	φ40 ^{H7}	φ50 ^{H7}	
Table overall Height	(mm)	280	320	380	
Table T-Slot Width	(mm)	18 ^{H7}	20 ^{H7}	22 ^{H7}	
Standard guide block width	(mm)	18 ^{H7}	20 ^{H7}	20 ^{H7}	
Hydraulic Pressure	(kg/cm ²)	35 by Hyd.	35 by Hyd.	35 by Hyd.	
Table max. Division	(division)	72	360	72	360
Minimum input increment	(degree)	5°	1°	5°	1°
Total speed (Motor 2000rpm)	Rotation Speed (r.p.m.)	16.6	11.1	11.1	
	Gear Ratio	1 / 120	1 / 180	1 / 180	
	FAULC	φ1F12	φ1F12	φ1F22	
Servo Motor (Optional)	MITSUBISHI	HF-2045	HF-2045	HF-3545	
	SIEMENS	1FK7083	1FK7083	1FK7101	
Rotation torque	(kgf·m)	200	280	430	
Indexing accuracy (accumulative)	(sec)	± 4"	± 4"	± 4"	
Repetitive accuracy	(sec)	± 1"	± 1"	± 1"	
Clamping Torque	p	3970 (kgf)	6448 (kgf)	9600 (kgf)	
	F x L	1428 (kg·m)	1980 (kg·m)	4000 (kg·m)	
	F x H	5390 (kg·m)	8232 (kg·m)	19110 (kg·m)	
Load Capacity	0°	1200	2500	4000	
Weight	Net	300	650	1000	

* We reserve the right to make changes arising from constant product development without advance notice.
 * The list of fitting servomotor please refer to page 43.

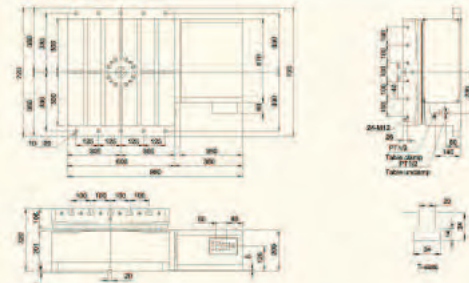
Guaranteed inspection accuracy

NO	Inspection Items	HC-450H	HC-600H	HC-800H
1	Concentricity of center hole	0.01	0.01	0.01
2	Table run out	mm 0.01	0.015	0.015
3	Table straightness	mm 0.015	0.02	0.02
4	Parallelism between plate and base	mm 0.015	0.02	0.02
5	Square of side reference plane	mm 0.015	0.02	0.02
6	T-Slot tolerance	mm 0.015	0.02	0.02

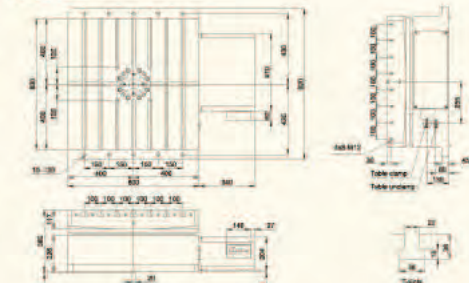
HC-450H



HC-600H



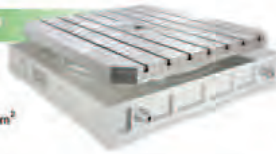
HC-800H



HC-HB

Non-lifting CNC Horizontal Hydraulic coupling
Gear Index Table

Motor driver with dual lead worm transmission
Built-in 3 pcs Hirsh coupling,
each every 1 or 5 degrees indexing (720 or 400)
Hydraulic clamping system, Hydraulic Pressure=35kg/cm²
■ Horizontal position only.



Model		HC-1000HB	HC-1400HB	HC-1800HB
Table Plate size (LxW)	(mm)	1000 x 100	1400 x 1400	1800 x 1800
Table overall Height	(mm)	445	500	500
Table T-Slot Width	(mm)	22 ST	22 ST	24 ST
Standard guide block width	(mm)	22 ST	22 ST	24 ST
Hydraulic Pressure	(kg/cm ²)	35 by Hyd.	35 by Hyd.	35 by Hyd.
Division		72 360	72 360	72 360
Minimum input increment	(degree)	5° 1°	5° 1°	5° 1°
Total speed (Motor 2000rpm)	Rotation Speed (r.p.m.)	5.5	2.78	2.78
	Gear Ratio	1 / 360	1 / 720	1 / 720
Servo Motor (Optional)	FANUC	αIF22	αIF30	αIF30
Rotation torque	(kgf·m)	600	750	900
Indexing accuracy (accumulative)	(sec)	± 4"	± 4"	± 4"
Repetitive accuracy	(sec)	± 1"	± 1"	± 1"
Machining thrust vertical (clamp status)	F	4000 39200	5000 49000	6000 58800
	(kgf) (N)			
Horizontal torque (clamp status)	F x L	700 6860	1100 10780	2000 19600
	(kg-m) (N-m)			
Tilting torque (clamp status)	F x H	2200 21560	2800 27440	3400 33320
	(kg-m) (N-m)			
Load Capacity	(kg)	5000	8500	15000
Weight	Net (kg)	3000	5000	7000

* We reserve the right to make changes arising from constant product development without advance notice.
* The list of fitting servomotor, please refer to page 43.

Guaranteed inspection accuracy

NO	Inspection Items	HC-1000HB	HC-1400HB	HC-1800HB
1	Concentricity of center hole	0.01	0.01	0.01
2	Table run out	mm 0.02	0.02	0.03
3	Table straightness	mm 0.02	0.03	0.04
4	Parallelism between plate and base	mm 0.02	0.03	0.04
5	Square of side reference plane	mm 0.02	0.03	0.04
6	T-Slot tolerance	mm 0.02	0.02	0.02

NCT-HB

CNC Horizontal Hydraulic Rotary Table

Motor driver with dual lead worm transmission
01001increment Continuous type
Hydraulic clamping system, Hydraulic Pressure=35kg/cm²
■ Horizontal position only.



Model		NCT-1000HB	NCT-1400HB	NCT-1800HB
Table Plate size (LxW)	(mm)	1000 x 100	1400 x 1400	1800 x 1800
Table overall Height	(mm)	445	600	600
Table T-Slot Width	(mm)	22 ST	22 ST	24 ST
Standard guide block width	(mm)	22 ST	22 ST	24 ST
Hydraulic Pressure	(kg/cm ²)	35 by Hyd.	35 by Hyd.	35 by Hyd.
Minimum input increment	(degree)	0.001°	0.001°	0.001°
Total speed (Motor 2000rpm)	Rotation Speed (r.p.m.)	5.5	2.78	2.78
	Gear Ratio	1 / 360	1 / 720	1 / 720
Servo Motor (Optional)	FANUC	αIF22	αIF30	αIF30
Rotation torque	(kgf·m)	600	750	900
Indexing accuracy (accumulative)	(sec)	15"	15"	15"
Repetitive accuracy	(sec)	± 1"	± 1"	± 1"
Machining thrust vertical (clamp status)	F	4000 39200	5000 49000	6000 58800
	(kgf) (N)			
Horizontal torque (clamp status)	F x L	500 4900	900 8820	1800 17640
	(kg-m) (N-m)			
Tilting torque (clamp status)	F x H	1800 17640	2400 23520	3000 29400
	(kg-m) (N-m)			
Load Capacity	(kg)	5000	8500	15000
Weight	Net (kg)	3000	5000	7000

* We reserve the right to make changes arising from constant product development without advance notice.
* The list of fitting servomotor, please refer to page 43.

Guaranteed inspection accuracy

NO	Inspection Items	NCT-1000HB	NCT-1400HB	NCT-1800HB
1	Concentricity of center hole	0.01	0.01	0.01
2	Table run out	mm 0.02	0.02	0.03
3	Table straightness	mm 0.02	0.03	0.04
4	Parallelism between plate and base	mm 0.02	0.03	0.04
5	Square of side reference plane	mm 0.02	0.03	0.04
6	T-Slot tolerance	mm 0.02	0.02	0.02

Agilent Laser Angular Position Measurement System



Innovation. Quality. Professional

HIGH ACCURACY AND SAFETY

Three Pieces of Hirth Coupling Gear clamping system and positioning

The positioning and accuracy are controlled by high precision three-pieces Hirth coupling. The entire range incorporate a non-lifting table top, there are provided with high accuracy accuracy ± 4 arc second for standard frame, heavy-duty cutting, rigidity and durable. CT series is non-lifting tabletop ensures that the table assembly is 100% sealed from contamination.

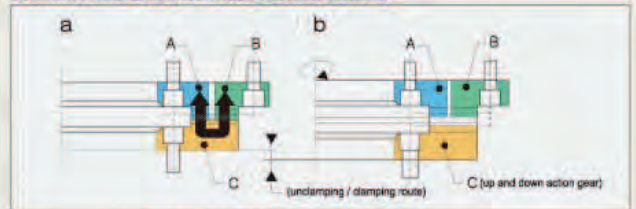
All function will be re-confirmation by feedback switches ensure safety operation.



CNC Hydraulic Coupling Gear Index Table



**Structure of Three Pieces Hirth Coupling Gears
Function Principles of Non-Lifting Indexing Tables**



Refer to above the drawing a. of picture.

There are three parts for the three pieces gear plate.

- A. Gear plate (locked on the rotation plate)
- B. Gear plate (locked on the base of the table)
- C. Gear plate (up and down action board)

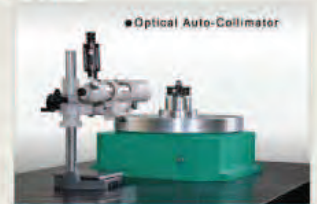
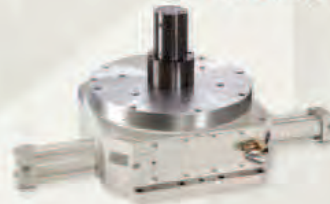
Refer to drawing b. Gear plate C, goes down, the index table is unclamping. Gear plate A has been supported.

plate is smooth rotation without vertical moving error.

Gear plate A had been index completion.

Gear plate C goes up to match Gear plate A and B. At moment, the index table is clamping.

Gear plate C has sufficient space to accommodate A, B and capable of focusing A and B. 30 degree between gear and gear. We assure you that long terms using still retaining high accuracy level.



Optical Auto-Collimator

CT-WS

Non-lifting Built-in Type Hydraulic Table Gear Index Table

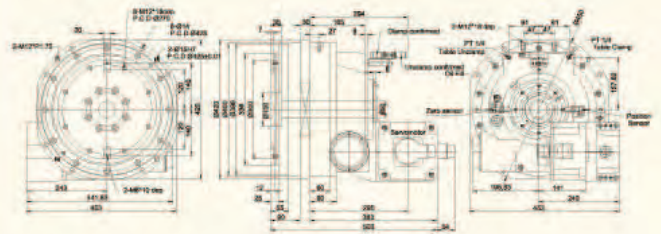
Motor driver with dual lead worm transmission,
Built-in 3pieces Hirth coupling for positioning and clamping
standard index number : 4, 6, 8, 12, 24 (one of them)
Indexing number : 2, 3, 5, 9 available by special order.
Hydraulic clamping system, hydraulic pressure=35kg/cm²
Built-in type vertical and horizontal position.



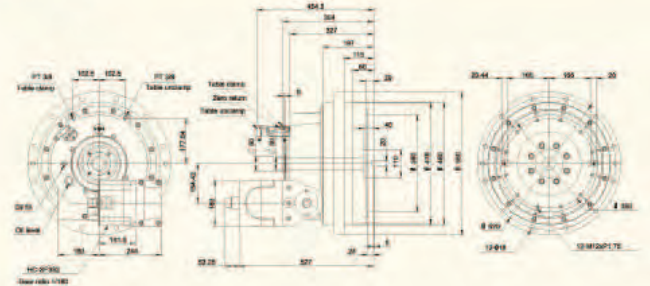
Model		CT-450WS	CT-600WS	
Table Diameter	(mm)	φ300	φ380	
Table fixed plate out diameter	(mm)	φ420	φ560	
Table Center Hole Diameter	(mm)	φ100 ^{HR}	φ110 ^{HR}	
Table Center Hole depth	(mm)	35	40	
Table Center Through Hole Diameter	(mm)	φ50	φ50	
Table Overall Height	(mm)	420	560	
Face of Guide block width	(mm)	20 ^{HP}	20 ^{HP}	
Center hole run out	(mm)	0.02	0.02	
Plate surface run out	(mm)	0.02	0.02	
Hydraulic Pressure	(kg/cm ²)	35 by Hyd.	35 by Hyd.	
Index number (standard)	(division)	4, 6, 8, 12, 24 (one of them)		
Index number (available)	(division)	2, 3, 5, 9... available by special order		
Rotation/direction		CW & CCW		
Indexing accuracy (accumulative)	(sec)	± 4"	± 4"	
Repetitive accuracy	(sec)	± 1"	± 1"	
Gear Ratio		1/120	1/180	
Max Rotation Speed (Servomotor 2000 rpm)	(rpm)	16.6	11.1	
MITSUBISHI Servomotor (Optional)		HC-SF202	HC-SF352	
Rotation torque	(kgf·m)	120	250	
Permissible instant inertia WR ²	(kg·m ²)	25	65	
Clamping Torque	φ	(kgf)	3970	6448
		(N)	38500	63000
	F × L	(kg·m)	1428	1980
		(N·m)	13990	19400
Load Capacity	F × L	(kg·m)	500	840
		(N·m)	5390	8232
Load Capacity	0°	(kg)	700	1250
	90°	(kg)	280	500
Weight	Net	(kg)	220	350

* We reserve the right to make changes arising from constant product developments without advance notice.
* The list of fitting servomotor, please refer to page 43.

CT-450WS



CT-600WS



MBT

Heavy duty Manual Indexing Table with Pneumatic clamping (Lifting type)

Built-in 2 pieces Hirth coupling for positioning and clamping
 Each every 1 or 5 degrees indexing (720 or 3600)
 Lifting type: Pneumatic clamping system,
 Pressure=6-8kgf/cm²
 Rotation by hand (manual type)
 Horizontal position used, table top special made available



Model		MBT-450	MBT-600	MBT-800	MBT-1000	MBT-1200					
Table Plate size (LxW)	(mm)	450 x 450	600 x 600	800 x 800	1000 x 1000	1200 x 1200					
Table Center Hole Diameter	(mm)	φ30 ^{H7}	φ40 ^{H7}	φ60 ^{H7}	φ80 ^{H7}	φ80 ^{H7}					
Table overall Height	(mm)	170	200	280	300	340					
Table T-Slot Width	(mm)	18 ^{H7}	20 ^{H7}	22 ^{H7}	22 ^{H7}	22 ^{H7}					
Driving of Vertical direction (Clamp/unclamp)		Pneumatic 5-8 kgf / cm ²									
Driving of Rotation		Manual/LCW/CCW by hand									
Table max. Division	(division)	72	360	72	360	72	360	72	360	72	360
Minimum index	(degree)	5°	1°	5°	1°	5°	1°	5°	1°	5°	1°
Indexing accuracy (accumulative)	(sec)	± 2"		± 2"		± 2"		± 2"		± 2"	
Repetitive accuracy	(sec)	± 1"		± 1"		± 1"		± 1"		± 1"	
Clamping force	(kg)	2200	3200	5400	6000	6100					
Theoretical vertical loading	(kg)	2400	3400	4500	6000	7000					
Load Capacity	Horizontal	(kg)	1000	2000	3000	5000	6000				
	Vertical	(kg)	2400	3400	4500	6000	7000				
Weight	Net	(kg)	200	400	1100	1350	2400				

Standard accessories

Block nuts	Air purge
①	②

Optional accessories

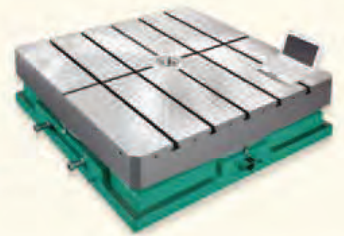
Special top plate	Different of standard Tslot	Other
*	*	*

Guaranteed inspection accuracy

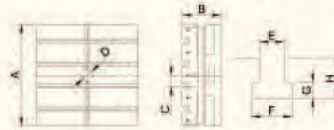
NO	Inspection items		MBT-450	MBT-600	MBT-800	MBT-1000	MBT-1200
1	Concentricity of the center	mm	0.01	0.01	0.01	0.01	0.01
2	Plate run out	mm	0.01	0.015	0.015	0.02	0.02
3	Plate straightness	mm	0.015	0.02	0.02	0.03	0.03
4	Parallelism between plate and base	mm	0.015	0.02	0.02	0.03	0.03
5	Square of side reference plane	mm	0.015	0.02	0.02	0.03	0.03
6	T-Slot tolerance	mm	0.015	0.02	0.02	0.03	0.03



Optical Auto-Collimator

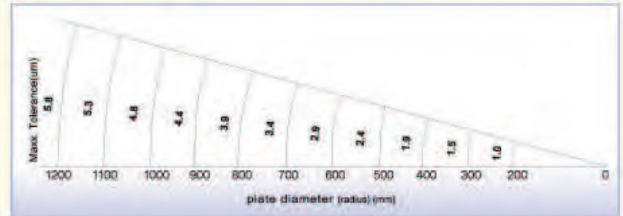


Dimension



Model	MBT-450	MBT-600	MBT-800	MBT-1000	MBT-1200
A	450	600	800	1000	1200
B	170	200	280	300	340
C	100	100	100	150	200
D ^{H7}	30	40	60	60	80
E ^{H7}	18	20	22	22	22
F	28	35	38	38	38
G	12	14	15	15	15
H	30	34	38	38	38

± 2 Sec Accuracy



MTS & MTS-B

Manual Tailstock

It has been designed to complement many of our Non-Lifting Indexing and NC Rotary Tables when heavy and/or long piece parts are being machined. Each model have standard center taper attached. MTS series attach MT#3. The bigger type of MTS - B series attached MT#4. The MTS models are actuated via an operator rotating the hand wheel by hand until the required pressure is reached. Standard center height from 110-400mm, please contact us if you have any other request.



ATS & ATS-B

Auto Tailstock

Hydraulic or Pneumatic type, It has been designed to complement many of our Non-Lifting Indexing and NC Rotary Tables when heavy and/or long piece parts are being machined. Each model have standard center taper inserted. ATS series attach MT#3. The bigger one of ATS - B series attached MT#4. The ATS models are actuated via hydraulic or Pneumatic source with manual operated valve available to change direction. Standard center height from 110-400mm.



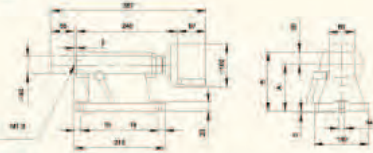
MTS & MTS-B Series / Manual Tailstock				Suitable model			
Manual Model	Central height A	Central height B	Net weight	TRT	NCT	HC	CT-V
MTS-110	110	140	12		NCT-125		
MTS-135	135	165	13	TRT-100	NCT-170	HC-200	
					NCT-200		
MTS-155	155	185	14				CT-200V
MTS-170	170	200	15		NCT-250	HC-250	
MTS-190	190	220	18	TRT-170			
MTS-B-210	210	250	27		NCT-320		CT-250V
MTS-B-230	230	270	30	TRT-250		HC-320	CT-320V
MTS-B-250	250	290	31		NCT-400	HC-400	
MTS-B-255	255	295	32	TRT-320			
MTS-B-310	310	350	56		NCT-500	HC-500	
MTS-B-400	400	440	74		NCT-610		

* MTS series center taper MT#3. * MTS-B series center taper MT#4.

ATS & ATS-B Series / Automatic Tailstock				Suitable model			
Auto Model	Central height A	Central height B	Net weight	TRT	NCT	HC	CT-V
ATS-110	110	157	18		NCT-125		
ATS-135	135	182	19	TRT-100	NCT-170	HC-200	
					NCT-200		
ATS-155	155	202	20				CT-200V
ATS-170	170	217	21		NCT-250	HC-250	
ATS-190	190	237	25	TRT-170			
ATS-B-210	210	257	34		NCT-320		CT-250V
ATS-B-230	230	277	37	TRT-250		HC-320	CT-320V
ATS-B-250	250	297	39		NCT-400	HC-400	
ATS-B-255	255	302	40	TRT-320			
ATS-B-310	310	357	64		NCT-500	HC-500	
ATS-B-400	400	447	82		NCT-630		

* ATS series center taper MT#3. * ATS-B series center taper MT#4.

MTS



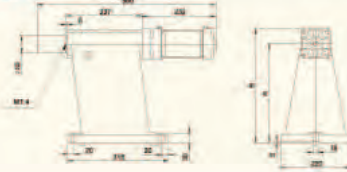
MTS-B



ATS



ATS-B



BTS

Support Tailstock with Hydraulic clamping

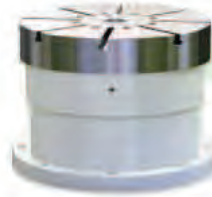
The heavy-duty BTS Series is fitted with a hydraulic distortion-free brake assembly, this series is also used for heavy loads when several Tables are fabricated together to achieve a Two-Axis Rotary-Tilting assembly.



EDS

Heavy Table with Built-in servomotor

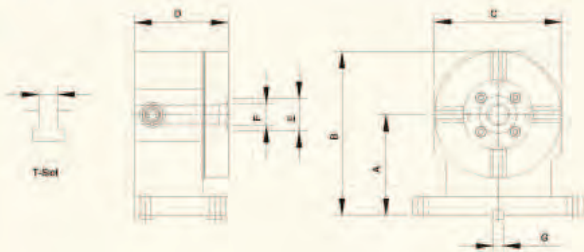
Direct Motor driving system with high speed performed
Built-in Fanuc Dis series motor
0.001 increment Continue type
Hydraulic clamping system
Horizontal position used



BTS Support Tailstock with Hydraulic Clamping											Suitable model		
Model	Center height	B	C	D	E	F	G	K	T	Net weight	NCT	HC	CT-V
BTS-125	110	190	200	150	40°	25	14°	70	12°	30	NCT-125		
	135	220								27	NCT-170		
BTS-170	135	220	170	125	30°	25	14°	94	12°	27	NCT-200	HC-200	
	155	240								33			CT-200V
BTS-200	155	255								41			CT-200V
	170	270	200	160	30°	27	18°	100	12°	47	NCT-250	HC-250	
BTS-250	210	310								55			CT-250V
	170	300								79	NCT-250		
BTS-320	210	340	260	190	50°	32	18°	120	12°	85	NCT-320		CT-250V
	230	360								90		HC-320	CT-320V
BTS-320	210	370								116	NCT-320		
	230	390	320	195	50°	32	18°	150	14°	120		HC-320	CT-320V
BTS-400	250	410								122	NCT-400	HC-400	
	250	455								238	NCT-400	HC-400	
BTS-400	310	515								258	NCT-500	HC-500	
	400	605	410	230	60°	51	18°	140	14°	290	NCT-630		
	480	685								350	NCT-800		

Model		EDS-400	
Table Diameter	(mm)	φ410	
Table Center Hole Diameter	(mm)	φ50 ^{IT7}	
Table overall Height	(mm)	380	
Table T-Slot Width	(mm)	14 ^{IT7}	
Minimum input increment	(degree)	0.001°	
Hydraulic Pressure for Table clamping	(kg/cm ²)	35	
Table Maximum Rotation Speed (with cooler)	(r.p.m)	300	
Table Maximum Rotation Speed (without cooler)	(r.p.m)	150	
Servomotor	Max. Torque	(N·m)	370
	Cont. Torque	(N·m)	150
	Max. Speed	(r.p.m)	300/150
Concentricity	(mm)	0.01	
Table run out of the table top	(mm)	0.01	
Indexing accuracy	(sec)	Depending on control unit and feedback system up to ±5°	
Clamping Torque	F	(kgf)	2000
	FxL	(kgf·m)	150
Load Capacity	Horizontal	(kg)	500
Weight	Net	(kg)	305

U15





DNS

AC digital individual controller



DNS controller is a single axis NC controller
 Easy programming from front board
 Available M code connection with machine for automatic start
 Available Handle wheel adapted by optional accessories

Model	TRT	NCT	HC
DNS 106	TRT-100, TRT-170	Rotary	
		Tilting	
DNS 110	TRT-250, TRT-320	Rotary	HC-200, HC-250
		Tilting	
DNS 120	TRT-450	Rotary	HC-320, HC-400, HC-500
		Tilting	
DNS 135		NCT-630, NCT-800, NCT-1000	

Item	Specification	Item	Specification
Dimensions	290 x 400 x 130mm (L x W x H)	Programmable angle	0.001°~360°
Input power	3 phase AC 220V ±10% 50 / 60 Hz	Mini increment	0.001°
Servo Motor	AC servo with feedback	Feeding rate	F1~F2000
Servo driver	AC servo driver	Program capacity	9 programs, 99 lines for each program
Zero return	Available by software/ hardware	Loop count	Up to 999 times/ per step
Input system	Key board	Programmable pulse	1~± 99999
Emergency stop	Emergency button and Power switch	Dividing into equal parts	2~999 equal division
Parameter setting	Available setting parameter	M Code	Connecting M/C
Program edit	Front Key board PROG writing	Net weight	9.8 kg

Standard accessories

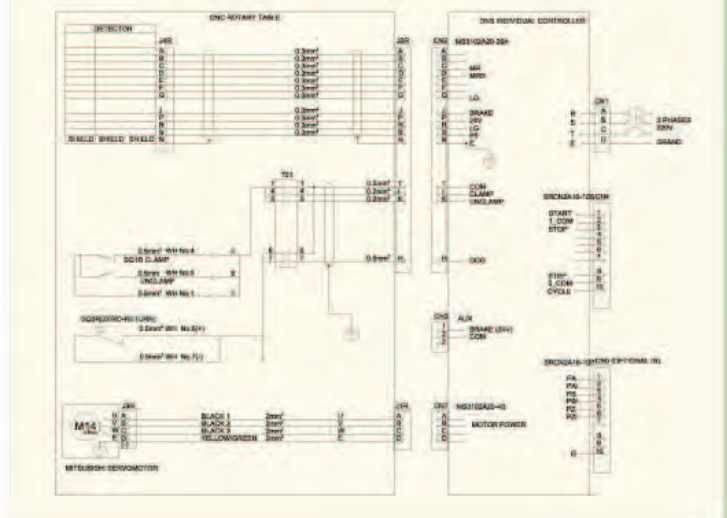
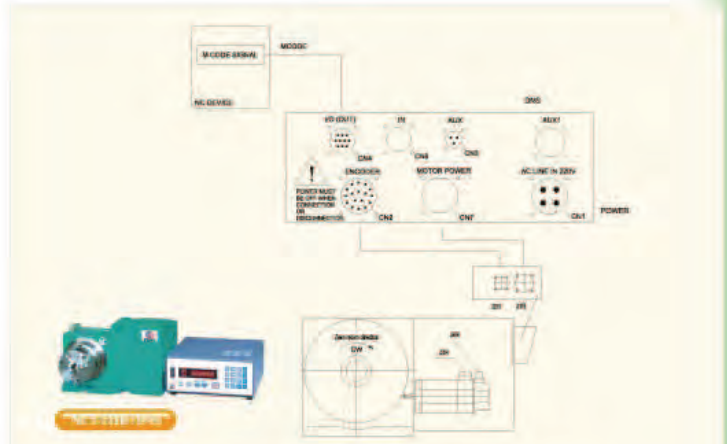
External cables with connector			M code connector
Main Power	Motor power	Motor feedback	

Optional accessories

Handle-wheel



- | | | |
|--|---|---|
| 1. Main power switch | 6. Function button
Program reset / zero based Lock | 9. Jog button |
| 2. Program step display | 7. Program step browsing button | 10. Zero return button |
| 3. Data display | 8. Emergency stop button (Pause) | 11. Start button |
| 4. Data enter keys
Program edit / Data display normal - green | | 12. Clear button
Screen reset / stop and clear operation / program clear |



Hirth Coupling

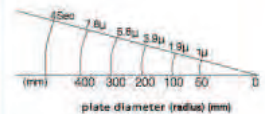
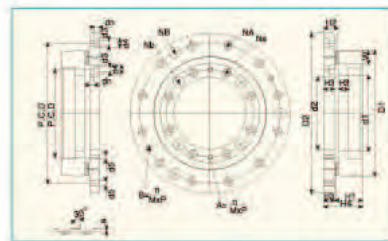
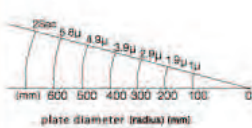
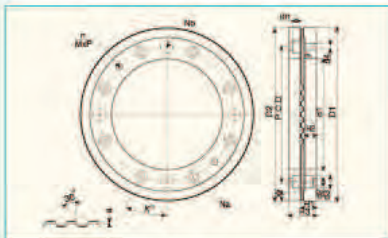
2 Pieces Hirth Coupling

Guaranteed index accuracy: +/-2 sec.
Material has been processed heat treatment;
There are height rigidity & durable force.
Precise producing, it could be interchangeable.

Special made available, please contact us for the required



Model No.	Teeth	Out Diameter	In Diameter	Teeth Profile	Teeth Thickness	Teeth Thickness	Thickness	Fixed screw					Pin hole					Withdraw screw					Pitch of top end
								Number	P.C.D.	Diameter	Hole depth	Number	P.C.D.	Hole angle	Diameter	Number	P.C.D.	Specification of the screw	Number	P.C.D.	Specification of the screw		
																						Na	
24120-60HV	24	120	118	60	8	8	8	80	6.5	11.8	6.0	1	80	30°	8	2	80	M8 x 1.25	1.3				
40146-80HV	40	146	138	80	12	12	12	100	6.6	11.8	6.0	3	100	30°	8	2	100	M8 x 1.25	1.37				
24180-120HV	24	180	178	120	10	10	10	140	6.0	14.0	6.0	3	140	22.5°	8	2	140	M8 x 1.25	1.61				
24200-120HV	24	200	198	120	10	10	10	150	6.0	14.0	6.0	3	150	22.5°	8	2	150	M8 x 1.25	1.68				
72200-120HV	72	200	198	120	10	10	10	150	6.0	14.0	6.0	3	150	22.5°	8	2	150	M8 x 1.25	0.99				
24250-160HV	24	250	248	160	11	11	11	195	6.0	17.5	10.0	3	195	22.5°	10	2	195	M10 x 1.50	1.42				
72250-160HV	72	250	248	160	11	11	11	195	6.0	17.5	10.0	3	195	22.5°	10	2	195	M10 x 1.50	1.42				
360250-160HV	360	250	248	160	7	7	7	250	13.0	17.5	10.0	3	195	22.5°	10	2	195	M10 x 1.50	0.3				
72320-210HV	72	320	318	210	12	12	12	258	13.0	20.0	12.0	3	285	15°	12	4	258	M12 x 1.75	1.74				
360320-210HV	360	320	318	210	8	8	8	258	13.0	20.0	12.0	3	285	15°	12	4	258	M12 x 1.75	0.85				
72360-250HV	72	360	358	250	12	12	12	300	13.0	20.0	12.0	3	300	15°	12	4	300	M12 x 1.75	1.37				
360360-250HV	360	360	358	250	10	10	10	300	13.0	20.0	12.0	3	300	15°	12	4	300	M12 x 1.75	0.29				
72400-280HV	72	400	398	280	14	14	14	335	13.0	20.0	12.0	3	335	15°	12	4	335	M12 x 1.75	1.52				
360400-280HV	360	400	398	280	13	13	13	335	13.0	20.0	12.0	3	335	15°	12	4	335	M12 x 1.75	0.48				
72420-320HV	72	420	418	320	14	14	14	360	13.0	20.0	12.0	3	360	15°	12	4	360	M12 x 1.75	1.39				
360420-320HV	360	420	418	320	13	13	13	360	13.0	20.0	12.0	3	360	15°	12	4	360	M12 x 1.75	0.45				
72520-415HV	72	520	518	415	16	16	16	450	13.0	20.0	12.0	3	450	15°	12	2	450	M12 x 1.75	1.97				
360520-415HV	360	520	518	415	16	16	16	450	13.0	20.0	12.0	3	450	15°	12	2	450	M12 x 1.75	0.57				
72600-480HV	72	600	598	480	20	20	20	530	13.0	26.0	16.0	3	530	15°	12	4	530	M12 x 1.75	2.28				
360600-480HV	360	600	598	480	16	16	16	530	13.0	26.0	16.0	3	530	15°	12	4	530	M12 x 1.75	0.66				
72800-660HV	72	800	798	660	18	18	18	710	17.0	26.0	16.0	3	710	15°	14	4	710	M12 x 1.75	1.90				
360800-660HV	360	800	798	660	19	19	19	710	17.0	26.0	16.0	3	710	15°	14	4	710	M12 x 1.75	1.26				
72900-740HV	72	900	898	740	21	21	21	800	17.0	26.0	16.0	3	800	15°	14	4	800	M12 x 1.75	2.60				
360900-740HV	360	900	898	740	21	21	21	800	17.0	26.0	16.0	3	800	15°	14	4	800	M12 x 1.75	0.80				



Hirth Coupling

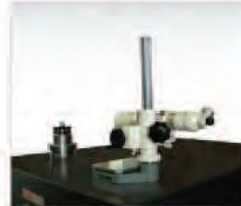
3 Pieces Hirth Coupling

Guaranteed index accuracy: +/-4 sec.
Material has been processed heat treatment;
There are height rigidity & durable force.
Precise producing, it could be interchangeable.

Special made available, please contact us for the required



Model No.	Teeth	Teeth Profile	Out Diameter	In Diameter	In Diameter	In Diameter	Teeth Thickness	Teeth Thickness	Thickness	Total Thickness	Pitch of top end	Fixed screw					pin hole					Withdraw screw						
												Number	P.C.D.	Diameter	Hole depth	Number	P.C.D.	Hole angle	Diameter	Number	P.C.D.	Specification of the screw	Number	P.C.D.	Specification of the screw	Number	P.C.D.	Specification of the screw
170-069-024	AB	24	17	-	-	170	69	-	18	12	57	2.5	150	88	8	7	11	4	2	M6xP1								
	C	24	17	158	95	-	-	43	-	-	57	2.5	-	-	8	7	11	4	2	M6xP1								
226-100-024	AB	24	16	-	-	226	100	-	22	16	67	2	204	120	8	8	14	4	2	M8 x P1.25								
	C	24	16	176	100	-	-	45	-	-	67	2	-	-	8	8	14	4	2	M8 x P1.25								
255-115-024	AB	24	20	-	-	255	115	-	22	16	61	2	244	140	8	9	14	4	2	M8 x P1.25								
	C	24	20	200	120	-	-	43	-	-	51	2	-	-	8	9	14	4	2	M8 x P1.25								
255-153-048	AB	48	20	-	-	255	115	-	22	16	61	2	224	140	8	9	14	4	2	M8 x P1.25								
	C	48	20	200	120	-	-	43	-	-	51	2	-	-	8	9	14	4	2	M8 x P1.25								
340-160-072	AB	72	24	-	-	340	160	-	24.5	18	74	2	300	190	8	11	17.5	4	2	M10 x P1.5								
	C	72	24	274	165	-	-	53.5	-	-	74	2	-	-	8	11	17.5	4	2	M10 x P1.5								
420-230-072	AB	72	32	-	-	420	230	-	28	21	76	2	390	270	12	14	20	4	2	M12 x P1.75								
	C	72	32	346	200	-	-	45	-	-	76	2	-	-	12	14	20	4	2	M12 x P1.75								
630-390-072	AB	72	31	-	-	630	390	-	38	21	98	2	370	430	12	18	26	4	2	M16 x P2								
	C	72	31	527	260	-	-	65	-	-	98	2	-	-	12	18	26	4	2	M16 x P2								




Technical for fitting servomotor information

FANUC	α 2	α 3 / α 4	α 6 / α 8	α 12	α 22
	α F2 / 5000	α F4 / 4000	α F8 / 3000	α F12 / 3000	α F22 / 3000
MITSUBISHI	α IS2 / 5000	α IS4 / 4000	α IS8 / 3000	α IS12 / 4000	α IS22 / 4000
	HA-33NC-TS	HA-40NC-5	HA-80NC-5	HA-100NC-5	HA-200NC-5
	HF-75T	HF-54T	HF-104T	HF-204S	HF-354S
	HF-44T	HF-53T	HF-103T	HF-203S	HF-353S
	X	HC-SF102	HC-SF152	HC-SF202	HC-SF352
SIEMENS	1FK6042	1FK6060	1FK6063	1FK6083	1FK6101/6103
	1FK7042	1FK7060	1FK7063	1FK7083	1FK7101/7103
HEIDENHAIN	QSY-96G	QSY116C	QSY116S	QSY155B	QSY155D
FAGOR	FXM31	FXM32	FXM34	FXM54	FXM73
	FXM22	FXM42	FXM44	FXM64	FXM66

※ If you have any other requirement, please contact us to get detail information.

Encoder-Heidenhain

	± 5"	± 3"	± 1"
	ROD 270, ROD 280 RON 275, RON 285 RCN 223F, RCN 223M RCN 226	ROD 780 RON 785 RCN 72X	ROD 880 RON 886 RCN 82X

Accessories

3-Jaw Manual Power Chuck with sub Plate

Model	Manual Chuck			Suitable model			
	Size	Sub Plate	TRT	NCT	HC	CT-V	
SK-5	5"	⊙		NCT-125			
SK-6	6"	⊙	TRT-120	NCT-170			
SK-7	7"	⊙		NCT-200	HC-200	CT-200V	
SK-8	8"	⊙	TRT-250	NCT-250	HC-250	CT-250V	
SK-10	10"	⊙	TRT-320	NCT-320	HC-320	CT-320V	
SK-12	12"	⊙	TRT-450	NCT-400, 500	HC-450, 500		

※ Other requirement, please contact us



PWC (Air Head)
Pneumatic source 5-8 kg/cm²
Solenoid valve 24V or
AC 110V/220V



Hydraulic unit
1HP x 4P, 12 liter / min, 40L,
2HP x 4P, 30 liter / min, 70L



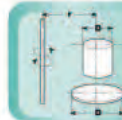
Servomotor
(FANUC, MITSUBISHI...)

Reference Date of Technological Information

Calculation Instant Inertia Formula



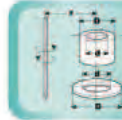
$$J = \frac{D^2}{8} \times m$$



$$J = \left(\frac{D^2}{8} + r^2 \right) \times m$$



$$J = \frac{D^2 + d^2}{8} \times m$$



$$J = \left(\frac{D^2 + d^2}{8} + r^2 \right) \times m$$



$$J = \left(\frac{L^2}{12} + \frac{D^2}{16} \right) \times m$$



$$J = \left(\frac{L^2}{12} + \frac{D^2}{16} + r^2 \right) \times m$$



$$J = \left(\frac{L^2}{12} + \frac{D^2}{16} \right) \times m$$



$$J = \left(\frac{L^2}{12} + \frac{D^2 + d^2}{16} + r^2 \right) \times m$$



$$J = \frac{A^2 + B^2}{12} \times m$$



$$J = \left(\frac{A^2 + B^2}{12} + r^2 \right) \times m$$



$$J = \frac{L^2}{12} \times m$$



$$J = \left(\frac{L^2}{12} + r^2 \right) \times m$$

Unit for Calculation

J = WIP = kg · m²
m = kg
A, B, D, L, d, r = m (meter)

Materials specification Gravity (S)

Cast Copper : 8.6
Steel Material : 7.8
Cast Iron : 7.5
Aluminum : 2.8

EXACT MACHINERY CO.,LTD



● HC-450H ● CT-478 ● HC-800H-B ● HC-1800H-B



● TRT-250 ● NCT-200R ● HC-250R ● NCT-125R-T4



● CT-478A ● CT-250V ● MBT-450 ● ERT-500



● NCT-170RB ● NCT-400RV ● NCT-320T ● NCT-800RV



● Agilent Laser Angular Position Measurement System



● Hardness tester instrument



● Surface Roughness Measuring Instrument



● Zeiss 3D Measuring machines



● Optical Auto-collimator

