CNC
MACHINERY SALES AUSTRALIA

detron
Precision NC Rotary Table

PRODUCT LINE UP

Quality and Cost Effect

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detron policy prohibits quoted products from being delivered to violate "The Wassenaar Arrangement" regulation.

We reserve the right to modify and withdraw any part of the content specified herein.

MAGNIFY THE VALUE OF MACHINERY

www.detron-rotary.com

GN_FEB_2024,EN

The Largest Professional Rotary Table Manufacturer

detron is committed to designing and engineering the highest quality NC rotary table products, through the experience, dedication and innovation of our International R & D team. Our mission is to understand and support our customer's needs with advanced application technology, with a wide range of products, providing optimum performance. Through intelligent design, easy integration to all machine tools is assured.

detron employs strict quality control at all stages of manufacture. Manufacturing all elements in house is the only way we can be sure of the quality of our product. With a huge efficient production facility, detron has become the largest NC rotary table manufacturer by volume in the World. This has ensured that detron are the selected partner of a wide variety of machine tool builders, both at home and internationally.

detron 2nd Factory

- Production Line of 5th axis
- production line for customizeation

Authorized Agent in Taiwan

- After-sales service and parts inventory
- distributor training center

detron Global Factory Outlet

Factory Outlet in Shanghai

- After-sales service and parts inventory
- distributor training center

Factory Outlet in Turkey

- After-sales service and parts inventory
- distributor training center

Factory Outlet in India

- After-sales service and parts inventory
- distributor training center

Factory Outlet in USA

- After-sales service and parts inventory
- distributor training center

Factory Outlet in Brazil

- After-sales service and parts inventory
- distributor training center

Factory Outlet in Korea

- After-sales service and parts inventory
- distributor training center

detron

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for VERTICAL

Machining Center Series

STANDARD 4th axis 5th axis APC

4th axis

GXA-S series

multiple pneumatic power clamp

GXA-125S
GXA-170S/H
GXA-210S/H
GXA-250S/H

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GXA-2W series

multi spindle,
pneumatic power clamp

GXA-170S-2W-250

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GXA-H/GX-H series

hydraulic clamp,
ultra large bore through

GXA-255H
GXA-320H
GXA-400H
GXA-500H
GX-630H
GX-800H

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GXA-L series

motor at left

GXA-170SL
GVA-210SL
GXA-255HL

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5th axis

GFA-S/H/HB series

compact 5th axis

GFA-101S
GFA-125S
GFA-170SII/HII
GFA-210S/H
GFA-255H/HB
GFA-320H

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GFA-2W series

5th axis in multi spindle

GFA-125S-2W-240
GFA-170S-2W-300

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GTFAE-2W/3W series

trunnion 5th axis in multi spindle

GTFAE-210S-2W-320
GTFAE-255H-2W(S)-400

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GTFAE series

trunnion 5th axis

GTFAS-125S
GTFAE-210S
GTFAE-320XB
GTFAE-320H
GTFAE-410XB
GTFAE-500XB

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GTFAE-L(S) series

trunnion 5th axis,
ultra large swing

GTFAE-170SL
GTFAE-255SBL(S)

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GTFAE-L(S) series

trunnions 5th axis,
ultra large swing

GTFAE-320XBL(S)
GTFAE-410XBL(S)
GTFAE-410HL(S)
GTFAE-500XBL

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STANDARD 4th axis 5th axis

RCX / RCF

RCX-S/H series
Roller Gear Cam Drive Rotary Table

- RCX-170RS/H
- RCX-210S/H
- RCX-250ES/H
- RCX-255H
- RCX-320EH

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RCF-S/H series
Roller Gear Cam Drive Rotary Table

- RCF-170S/H
- RCF-210S/H
- RCF-255H
- RCF-320EH

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DDM

DV series
high speed 4th axis by DDM built-in

- DV-170P
- DV-255PII

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DTF series
high speed 5th axis by DDM built-in

- DTFS-125P
- DTFE-125P
- DTFS-170P
- DTFE-170P
- DTFE-171P
- DTF-280P
- DTFAI-650H
- DTFAI-720EH

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Others

GVA-B series
4th axis with motor at back

- GV-170SB
- GVA-210SB
- GVA-255HBII

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CXries
hydraulic indexing table by hirth coupling

- CX-255H
- CX-320H
- CX-400H
- CX-500H

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Tailstock

ST-T/TP/TH series
quill type tailstock

- ST-125T/TP
- ST-170T/TP
- ST-210T/TP
- ST-255T/TH
- ST-320T/TH
- ST-400T/TH

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SR-P/H series
rotary type tailstock

- SR-125P
- SR-170P
- SR-210P
- SR-255H
- SR-320H
- SR-400H
- SR-500H

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CUSTOMIZATION 5th axis APC

Customized Product with DDM

Pallet changeable

With sub support

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Low gravity and dual drive at tilting axis

Page 66

Built in machine table

for VERTICAL

Machining Center Series

Auto Pallet Change

For VMC with fixed column

- CVR-660
- CVR-850
- CVR-10D

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For VMC with movable column

- SVC-7050II
- SVC-10065II

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Quality Policy

Product Assembly

Standardization in each operation process, with high volume production management, stable quality is guaranteed.

Calibration & Inspection

Apply German Zeiss CMM for full geometric precision inspection and high resolution Renishaw laser calibration to indentify positioning accuracy.

Professional Training

R&D division stands by customers with innovation to upgrade application.
On-site technician trainings are regularly taken to intensify engineering skills.

Technical Center and Laboratory

detron laboratory continues various experiments to approve product features. Scientific data applied for optimization for all detron new products and new material.

Dynamic 5 axis Location Alignment

detron own measurement facility with European IBS rotary inspector and software. To provide sufficient efficiency of 5 axis machine manufacturing and processing.

CNC Dynamic 5 axis Machining Application Center

detron own measurement facility with European IBS rotary inspector and software. To provide sufficient efficiency of 5 axis machine manufacturing and processing.

Pratical Clamping Force Approved

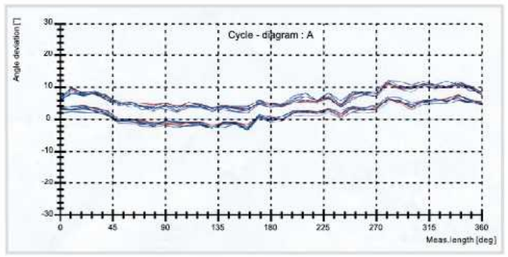
GXA-170S remains stable & high accuracy performance with repeated clamping test. This clamp test is part of the standard testing procedure of every **detron** product.

Scan these QR codes to see video:

Accuracy Inspection Norm

detron

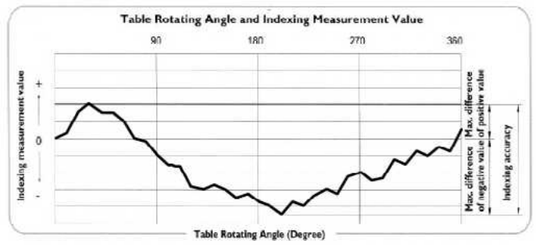
ISO 230-2 Norm (equal to JIS B 6192)



Accuracy Inspection upon ISO 230-2 international norm is operated with 5 continuous cycles in clockwise and counterclockwise test.

others

JIS B 6330 Norm in Single cycle



Simplified inspection norm without number of laps indicated.

Facility of Inspection

detron applies Heidenhain optical encoder and Renishaw ballbar system to approve positioning and repeatability accuracy.

Update Accuracy Identification

Accuracy of Positioning by ISO 230-2 Standard (Unidirectional systematic positioning deviation of an axis)

The inspection presentation of ISO 230-2 is based on continuously 5 revolutions of repeatedly clockwise and counter-clockwise test, to diagnose unidirectional systematic positioning deviation.

Remark: Due to environmental influences during the measurement, the recorded measuring error may exceed the catalog limit value by up to 10%.

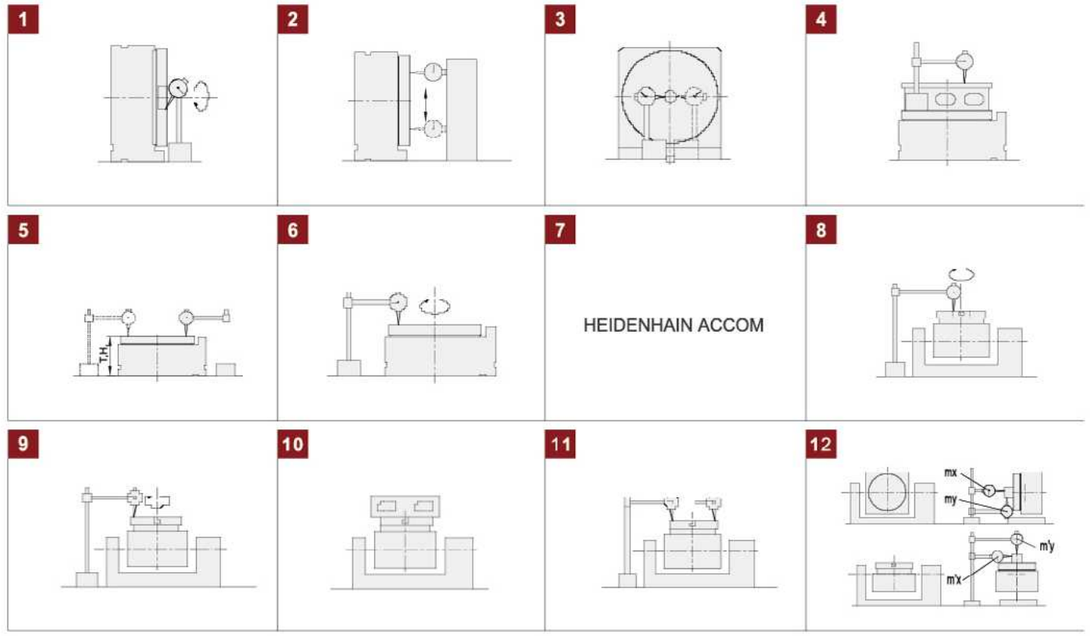
Accuracy of Repeatability by ISO 230-2 Standard (Unidirectional repeatability of positioning)

The inspection presentation of ISO 230-2 based on continuously 5 revolutions of repeatedly clockwise and counter-clockwise test, to diagnose unidirectional systematic repeatability of positioning deviation.

Please note: Due to environmental influences during the
measurement, the recorded measuring error may exceed the catalog limit value by up to 10%.

detron

Accuracy Tolerance Chart



Description of Inspection

NO.

Unit: mm

			GXA-125S~GXA-210S	GXA-255H~GXA-500H	GX-630H~GX-800H
1.	Run-out of center hole		0.01	0.01	0.01
2.	Perpendicularity between table surface and base bottom		0.02	0.02	0.02
3.	Parallelism between center hole and center of guide block Deviation between center hole and center of guide block		0.02 0.02	0.02 0.02	0.02 0.02
4.	Flatness of table surface		0.01	0.015	0.02 / 0.025
5.	Parallelism between table surface and table base		0.01	0.015	0.02 / 0.025
6.	Run-out of table surface Indexing accuracy		0.01	0.015	0.02
7.	Repeatablility accuracy		40 sec- GXA125 20 sec - GXA170-210	15 sec	15 sec
			GFA Series (for all 5 axis)		
8.	Run-out of table surface		0.01		
9.	Flatness of table surface		0.015		
10.	Parallelism between table			0.01	(Ø400-500: 0.015)
11.	Surface and base		0.02		
	Indexing	Rotary	Refer to specification chart of each model		
		Tilt	Refer to specification chart of each model		
	Repeatability	Rotary	6 sec.		
		Tilt	8 sec.		
12.	Parallelism between center line of tilt axis and base plate		0.02/Dia		

Core Components — Facilities and Precise Process

detron

German Lieberr Hobbing Machines

Vertical Hobbing Machine

detron applies German Gleason Vertical Hobbing Machine, to achieve the accuracy of worm wheel to DIN1 level.

Vertical grinding machine with hydrostatic bearing technology

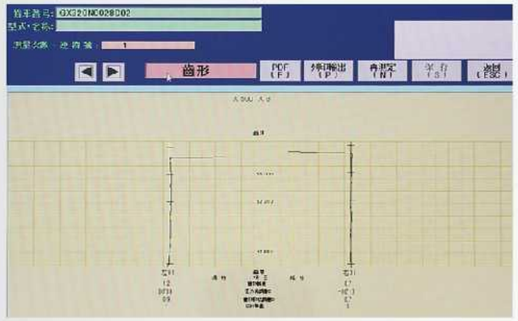
Finishing grinding for casting ID

Finishing grinding for gear face

Finishing grinding for brake drum face+ID+OD

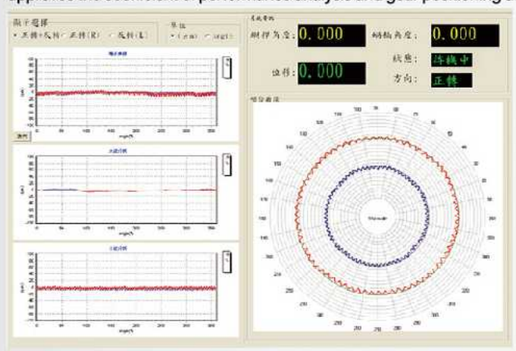
Gear Measuring Machine

detron applies NC control high precision gear measuring system, to ensure the optimum occlusion of worm shaft and wheel during dynamic operation.



Gear Teeth Occlusion Inspection

detron applies European specified gear occlusion tester to calibrate tooth-flank accuracy.
Dual encoder mounted at both terminals for worm shaft and wheel. The comparison of transmissions by theoretical and practical measurement approves the coefficient of performance analysis and gear positioning accuracy.



Automation for Burr Removing

Main Spindle Preload

Prepare for Industry 4.0

Recommended hardware corroboration in Industrial 4.0 chain.

Integration with High Efficient Mold Change

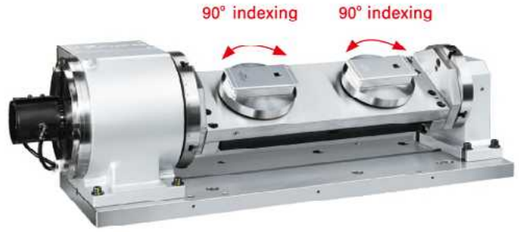
▲ Application of BT40/50 arbors as parts fixture jig can be integrated into Auto Parts-holding Change system.

▲ To ease the modulation of parts- holding system in mass production and high end automation, **detron** develops sufficient interface to adapt various quick mold changing device, such as EROWA and SCHUNK.

Magnifying the Machining Value

Solutions by Smart Attachments

▲ Standard **detron** models can be modified to provide additional solutions, such as the standard CX-500 model for example, which could be used as an auto pallet system, which is illustrated above and is renamed the SVW-500.

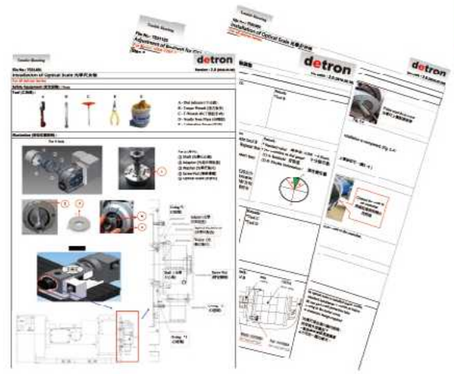


▲ A 90 degree indexer can be modified into a 5 face machining system, options include selected number of multiple spindles and various centre distances according to the application.

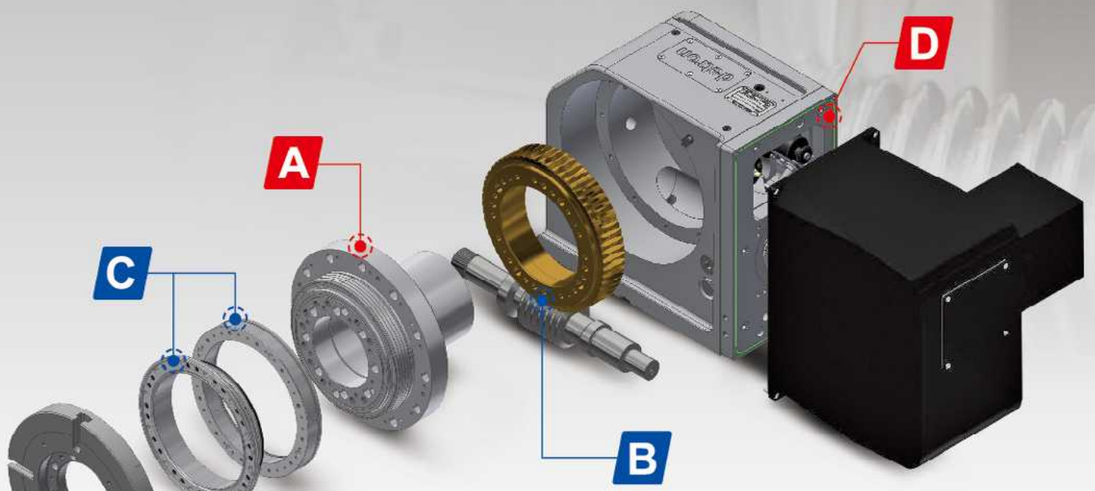
Detron On-Line Service

detron On-Line
Service

When owning a **detron** table, you become part of the **detron** family. Support is provided during the selection process, installation and aftersales and help is never far away. With instant access to on line support, or you can talk to your local detron factory outlet. Join the detron family.



Core Technology —
Key Parts & Advantages Description



A High Rigidity Consolidated Spindle

YRT bearing integrated in consolidated spindle with least separate elements & premium rigidity.

-refer to P18 for more details-

B High Endurable Worm Gear Set

Exclusive application of patented high- endurable copper alloy for detron appointed models.

-refer to P20 for more details-

C Reliable Clamping Force

Hydraulic Model: Special design of drum brake system.

Pneumatic Model: exclusive patented dual pistons design.

-refer to P19 for more details-

D High Level Waterproof Design

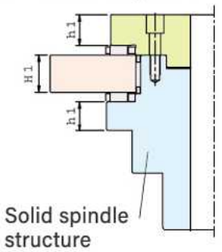
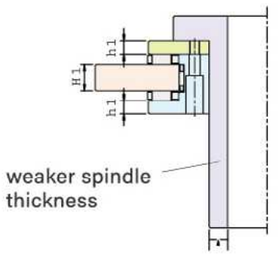
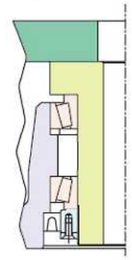
All covers interface with machined groove and Trelleborg seals applied.Waterproof grade IP65.

-refer to P21 for more details-

Core Technology —
High Rigidity Consolidated Spindle

for VMC_Worm Wheel Transmission

Comparison of Spindle and Bearing

detron	others	others
		
YRT bearing integrated in consolidated spindle.	3 pieces YRT bearing	Economic taper roller bearing
		
least separate elements, premium rigidity.	more separate parts, more accumulated error, lower rigidity	not recommanded for medium - big table (Ø210mm)

Rigidity >

Rigidity >

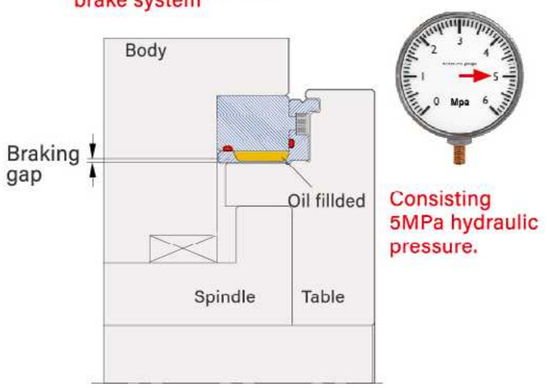
- The roller parts and steady supportive guide ways distinctly share 20-30% and 70-80% from the whole spindle rigidity.
- H1 & h1, as the supportive roller guide ways, are thicker on detron spindle and act high rigidity.
- Less separate parts, less accumulated error concern.

Core Technology — Reliable Clamping Force

Safe and Double Insured Hydraulic Brake

detron

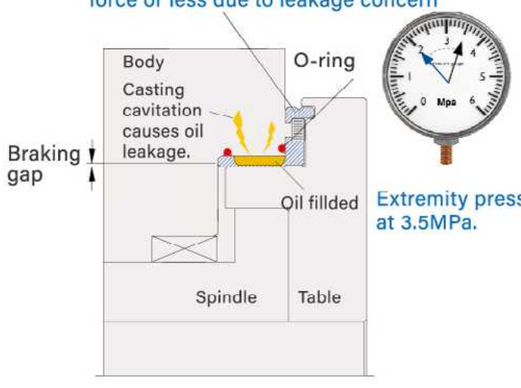
Special design of drum brake system



Consisting 5MPa hydraulic pressure.

Others

Normal drum brake system by 35kg force or less due to leakage concern



Extremity pressure at 3.5MPa.

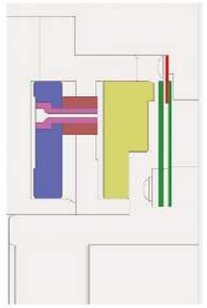
Fully enclosed drum ring resulting in thorough sealing to ensure high stability at higher pressures. Optimized alignment to table body resulting in a more uniform brake contact.

Poor oil sealing, no centricity alignment, no brake gap adjustment, unstable clamping force.

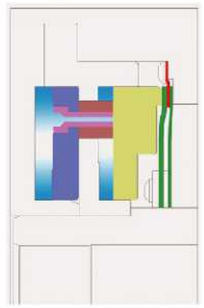
Patented Dual Pneumatic Piston, Braking Force Promoted

detron

unclamped



clamped

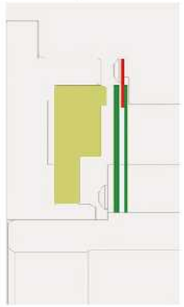


Blue zone is the pneumatic inflation room.

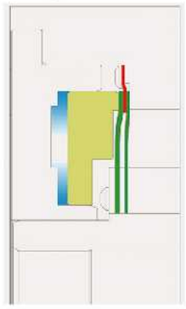
detron applies exclusive patented dual pistons to multiply the pneumatic pressure zone and promote the clamping power.

others

unclamped



clamped



Blue zone is the pneumatic inflation room.

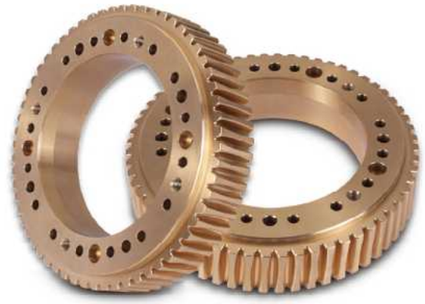
Limited effects by less pneumatic inflation zone of conventional single piston. Lower clamping force.

Core Technology — High Endurable Worm Gear Set

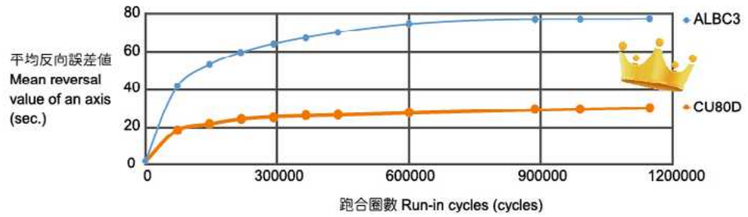
Exclusive Worm Wheel Material -CU80D

Exclusive application of patented high- endurable copper alloy for detron appointed models.

260% resistance for abrasion compared to conventional worm wheel materials by other brands.

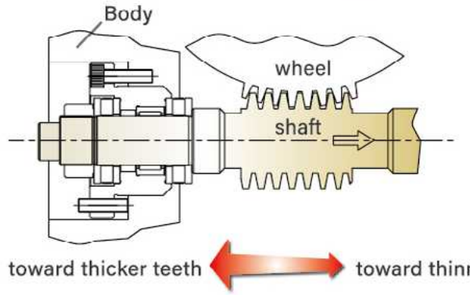


CU80D vs ALBC3



260% resistance increased

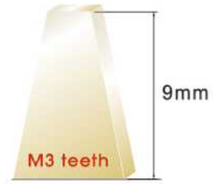
Precise Dual Lead Worm Shaft and Gear



- Offset in axial direction retains eternal radial geometry accuracy of worm shaft and wheel.
- Stable gear occlusion accuracy.

Teeth Module Promoted

detron

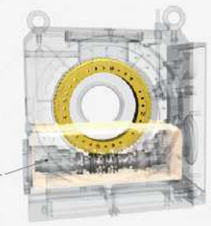


others

- 30% higher contact surface of gear teeth engagement than conventional worm gear.
- Comparing equal table spec, higher teeth depth provides optimum rigidity for heavy cut.

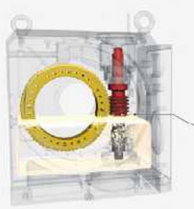
Lubrication and Thermal Control

detron



Worm shaft seated in bottom horizontally. Fully lubrication and safe thermal control.

others

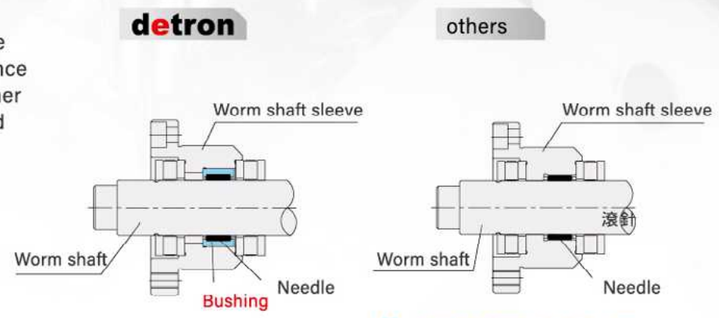


Only half section of worm shaft lubricated, thermal deformation is concerned.

Core Technology — Endurance and Protection

Reliable Worm Shaft Rotation

Applying a bushing between sleeve and needle to increase the endurance of the sleeve bore, resulting in higher concentricity of the worm shaft and higher indexing accuracy.



High Concentricity, Consistent Accuracy

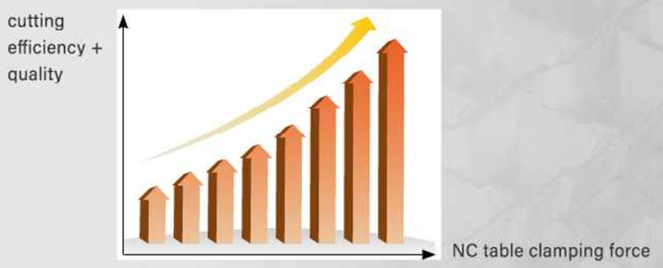
Waterproof Design

- The electronic parts guard is completely sealed by O-ring to prevent cutting fluid entering and motor burnout.
- Barotropic built-in for dew-proof.
- Waterproof grade IP65.

Circumference is fully sealed by O-ring to prevent fluid from entering

Clamping Force Supports Advanced Application Engineering

High clamping forces are an important factor when high cutting efficiency is required. It is recommended that ***200%*** *brake force to cutting forces is applied for optimum performance.*



Machine Performance
+
Tooling Condition
+
Reliable Parts Holding
↓
Productivity and Precision

Core Technology

Grinding of consolidated spindle unit

Grinding of worm shaft teeth

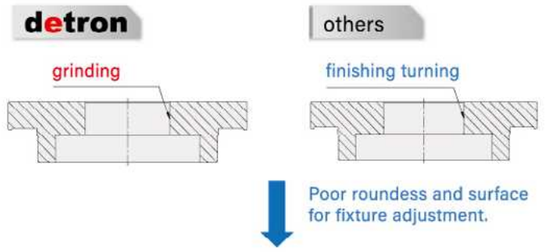
for VMC_Worm Wheel Transmission

Processing Of Spindle Bore

Advantages of center positioning hole with grinding

- Superior roundness and surface roughness.
- High accuracy when adjusting jig on center bore.
- Large spindle hole diameter allows multi-port oil distributor mounted.

Quicker Precise Mold Change. Higher Indexing Accuracy and Concentricity.

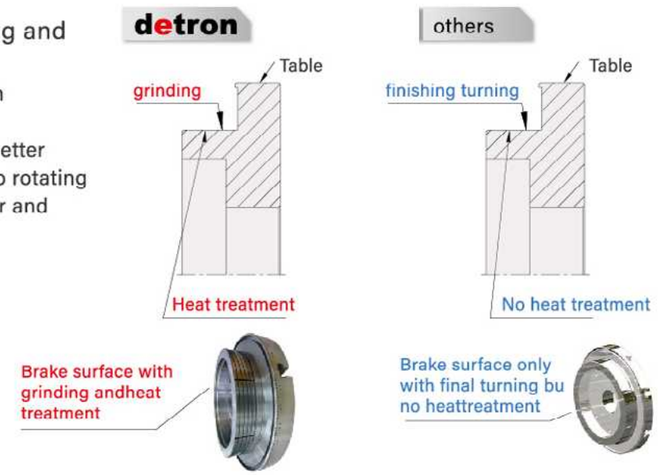


Fine Finishing Machining Of Brake Shaft

Advantages of surface with hardening and grinding

- Least scratch and wearing concerns, high resistance for large clamping force.
- Precision grinding at the brake features better roundness and cylindricity. As a result, no rotating center offset, minimizing positioning error and increased clamping life are ensured.

Increased Clamping Life. No Offset During Braking.



CNC Rotary Table

High - Power Pneumatic Clamp

G X A - 1 7 0 S

- G: worm gear transmission
- X: Vertical & horizontal application
- A: new optimization model
- 170: table size
- S: superior pneumatic clamp

- Worktable diameter Ø125, Ø170, Ø210, Ø255
- Exclusive patented dual pneumatic piston braking system.(P.19)
- Higher rotation speed.
- Equipped with high precision cross roller.
- Full gear depth transmitted by dual lead worm drive, resulting in higher efficiency and lower backlash.(P.20)

Equipped with upgraded high precision cross roller bearing

SPECIFICATIONS

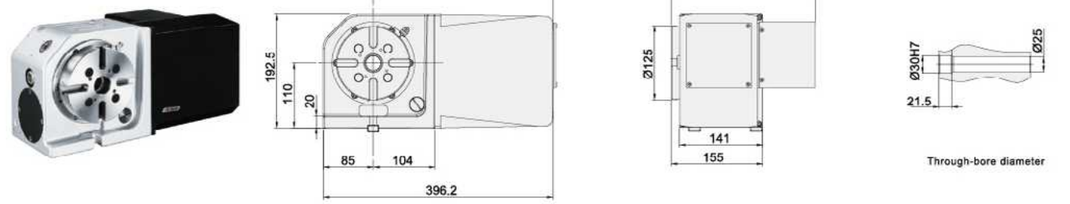
MODEL		Unit	GXA-125S	GXA-170S/H	GXA-210S/H GXA-250S/H	GXA-170S-2W-250
Worktable diameter		mm / inch	Ø125 / Ø 4.92	Ø170 / Ø 6.69	Ø210 / Ø 8.27 Ø255 / Ø 10.04	Ø170 / Ø 6.69
Center bore diameter		mm / inch	Ø30H7 / Ø 1.18H7	Ø40H7 / Ø 1.57H7	Ø65H7 / Ø 2.56H7	Ø40H7 / Ø 1.57H7
Through-bore diameter		mm / inch	Ø25 / Ø 0.98	Ø40 / Ø 1.57H7	Ø65 / Ø 2.56H7	Ø40 / Ø 1.57H7
Pitch of rotary axis		mm / inch	N/A	N/A	N/A	250 / 9.84
Height of table (horizontal)		mm / inch	155 / 6.10	175 / 6.89	175 / 6.89 190 / 7.48	175 / 6.89
Height of table (vertical)		mm / inch	110 / 4.33	135 / 5.31	160 / 6.3	135 / 5.31
Width of T-slot		mm / inch	12H7 / 0.47H7	12H7 / 0.47H7	12H7 / 0.47H7	12H7 / 0.47H7
Width of guide block		mm / inch	18 / 0.71	18 / 0.71	18 / 0.71	18 / 0.71
Clamping method / pressure		MPa / psi	Pneumatic 0.55 ~ 0.7 / 79.8-101.5	Pneumatic 0.55 ~ 0.7 / 79.8-101.5	Pneumatic 0.55 ~ 0.7 / 79.8-101.5	Pneumatic 0.55 ~ 0.7 / 79.8-101.5
Clamping torque		N.m / ft. lbs.	140 / 103.8	300 / 221 450 / 332	400 / 295 600 / 443	300 / 221.1
Servo motor spec			refer to page 71			
Transmission ratio			1 / 40	1 / 60	1 / 72	1/90
Max. table speed / at specified servo motor speed		min^{-1}	66.6 / 2664	53.3 / 3200	53.3 / 3840	22.2 / 2000
Standard loading inertia*	$(\frac{W.D^2}{8})$	$kg.m^2$	0.2	0.72	1.38	0.54
Maximum loading inertia*	$(\frac{W.D^2}{8})$	$kg.m^2$	1	3	5	2.5
Resolution		deg.	0.001	0.001	0.001	0.001
Indexing accuracy		sec.	40	20	20	20
Repeatability		sec.	6	6	6	6
Net weight (servo motor excluded)		kg / lb	32 / 70.40	51.5 / 113.3	60 / 132 66.3 / 145.86	115 / 253.5
Allowable loading capacity	Vertical	kg / lb	50 / 110	100 / 220	125 / 275	75 / 165
	Horizontal	kg / lb	100 / 220	200 / 440	250 / 550	150 / 330
	Rotary Tailstock applied	kg / lb	100 / 220	200 / 440	250 / 550	150 / 330
FxL When table clamped	F	N / lbs	9700 / 2176.68	14000 / 3141.6	17000 / 3814.8	14000 / 3141.6
	FXL	N.m / ft. lbs.	410 / 302.17	1020 / 751.74	1265 / 932	1020 / 751.74
	FXL	N.m / ft. lbs.	140 / 103.8	300 / 221 450 / 332	400 / 295 600 / 443	300 / 221.1
Allowable cutting torque		N.m / ft. lbs.	85 / 62.65	200 / 147.41	260 / 191.62	200 / 147.41
Allowable Max. rotary joint quantity			-	4	4	4

Note: 1. Allowable cutting torque at table speed of 1 min^{-1}.
2. Standard loading inertia * is allowed in max table speed. Contact detron for the necessary adjustment of speed and others when maximum loading inertia * is required.
3. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

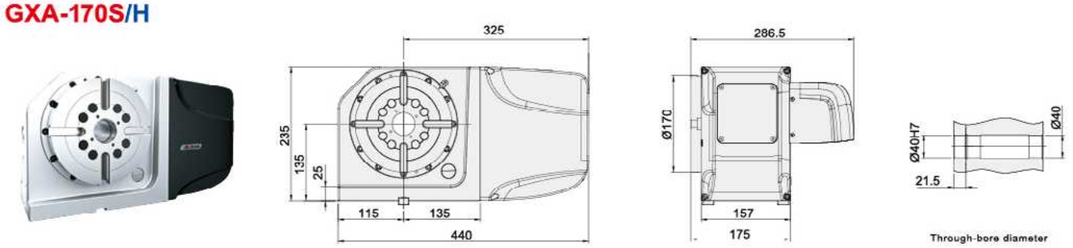
DIMENSIONAL DRAWINGS

Unit : mm

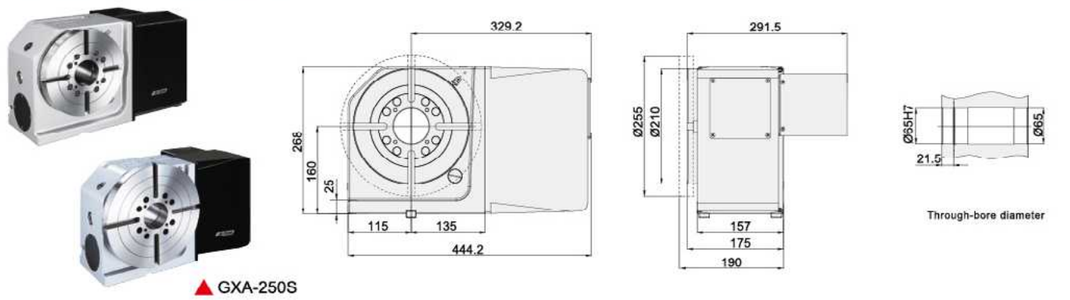
GXA-125S



GXA-170S/H

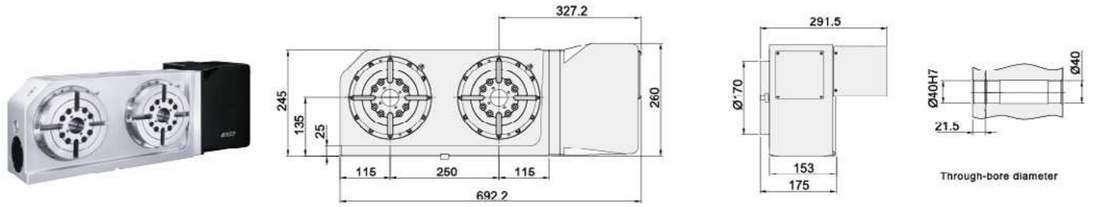


GXA-210S/H / GXA-250S/H



▲ GXA-250S

GXA-170S-2W-250



Note: The length of servo guard may vary with servo motor type.
(the metal sheet dimensions shown above are based on Fanuc motor)

CNC Rotary Table

Ultra Big Spindle Bore, Hydraulic Clamp

G X A - 2 5 5 H

- G: Worm gear transmission
- X: Vertical and horizontal application
- A: New optimization model
- 255: Table size
- H: Hydraulic clamp

- Worktable diameter Ø255, Ø320, Ø400.
- Big spindle bore allow the more complex parts clamping and fixture.
- Ultra high clamping force by drum brake system.(P.19)
- Consolidated spindle with radial-Axial bearing built-in. (P.18)
- Full gear depth transmitted by dual lead worm drive, resulting in higher efficiency and lower backlash.(P.20)

Consolidated spindle with radial-Axial bearing built-in.

SPECIFICATIONS

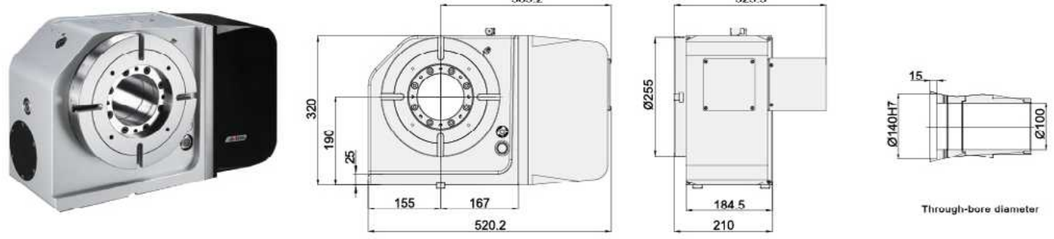
MODEL		Unit	GXA-255H	GXA-320H	GXA-400H
Worktable diameter		mm / inch	Ø255 / Ø 10.04	Ø320 / Ø 12.6	Ø400 / Ø 15.75
Center bore diameter		mm / inch	Ø140H7 / Ø 5.51H7	Ø180H7 / Ø 7.08H7	Ø220H7 / Ø 8.66H7
Through-bore diameter		mm / inch	Ø100 / Ø 3.94	Ø140 / Ø 5.51	Ø180 / Ø 7.09
Height of table (horizontal)		mm / inch	210 / 8.27	235 / 9.25	255 / 10.04
Height of center (vertical)		mm / inch	190 / 7.48	210 / 8.27	255 / 10.04
Width of T-slot		mm / inch	12H7 / 0.47H7	14H7 / 0.55H7	14H7 / 0.55H7
Width of guide block		mm / inch	18 / 0.71	18 / 0.71	18 / 0.71
Clamping method / pressure		MPa / psi	Hydraulic 5 / 725	Hydraulic 5 / 725	Hydraulic 5 / 725
Clamping torque		N.m / ft. lbs.	900 / 663.3	1600 / 1179.2	3000 / 2211
Servo motor spec				refer to page 71	
Transmission ratio			1 / 120	1 / 120	1 / 144
Max. table speed / at specified servo motor speed		min^{-1}	22.2 / 2664	22.2 / 2664	11.1 / 1600
Standard loading inertia*	$(\frac{W.D^2}{8})$	$kg.m^2$	2.43	5.12	10.2
Maximum loading inertia*	$(\frac{W.D^2}{8})$	$kg.m^2$	12	20	40
Resolution		deg.	0.001	0.001	0.001
Indexing accuracy		sec.	15	15	15
Repeatability		sec.	6	6	6
Net weight (servo motor excluded)		kg / lb	114 / 251	147 / 323.4	253 / 556.6
Allowable loading capacity	Vertical	kg / lb	150 / 330	200 / 440	250 / 550
	Horizontal	kg / lb	300 / 660	400 / 880	500 / 1100
	Rotary Tailstock applied	kg / lb	300 / 660	400 / 880	500 / 1100
FxL When table clamped	F	N / lbs	20000 / 4488	28000 / 6283.2	38000 / 8527.20
	FXL	N.m / ft. lbs.	1700 / 1252.9	3000 / 2211	5400 / 3979.8
	FXL	N.m / ft. lbs.	900 / 663.3	1600 / 1179.2	3000 / 2211
Allowable cutting torque		N.m / ft. lbs.	550 / 405.35	780 /574.86	1700 / 1252.9
Allowable Max. rotary joint quantity			6	6	6

Note: 1. Allowable cutting torque at table speed of 1 min^{-1}.
2. Standard loading inertia * is allowed in max table speed. Contact detron for the necessary adjustment of speed and others when maximum loading inertia * is required.
3. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

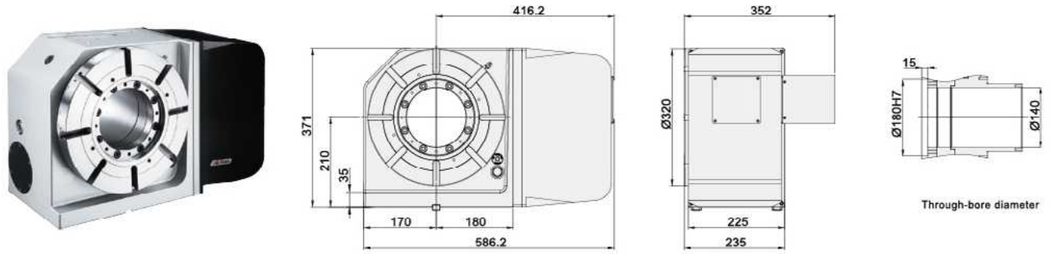
DIMENSIONAL DRAWINGS

Unit : mm

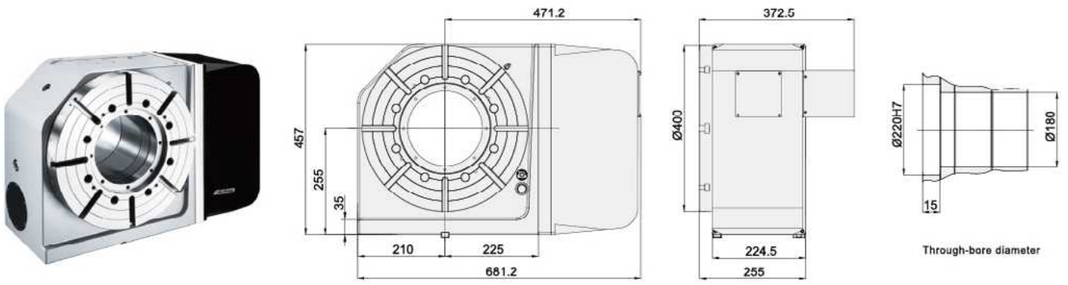
GXA-255H



GXA-320H



GXA-400H



Note: The length of servo guard may vary with servo motor type.
(metal sheet dimensions shown above are based on Fanuc motor)

CNC Rotary Table

Ultra Big Spindle Bore, Hydraulic Clamp

G X A - 5 0 0 H

- Hydraulic brake
- New optimization model
- Table size
- Veritcal & horizontal application
- Worm gear transmission

- Worktable diameter Ø500, Ø630, Ø800.
- Equipped with extra large bearings, preloaded in radial and axial directions.(P.18)
- Motor is mounted at right side(vertical and horizontal application).
- Full gear depth transmitted by dual lead worm drive, resulting in higher efficiency and lower backlash.(P.20)

Consolidated spindle with radial-Axial bearing built-in.

SPECIFICATIONS

MODEL		Unit	GXA-500H GXA-630EH	GX-630H	GX-800H
Worktable diameter		mm / inch	Ø500 / Ø19.69 Ø630 / Ø24.80	Ø630 / Ø24.80	Ø800 / Ø31.50
Center bore diameter		mm / inch	Ø305H7 / Ø12H7	Ø270H7 / Ø10.63H7	Ø285H7 / Ø11.22H7
Through-bore diameter		mm / inch	Ø265 / Ø10.43	Ø220 / Ø8.66	Ø240 / Ø9.45
Height of table (horizontal)		mm / inch	280 / 11.02	325 / 12.80	365 / 14.37
Height of center (vertical)		mm / inch	350 / 13.78	400 / 15.75	480 / 18.90
Width of T-slot		mm / inch	18H7 / 0.71H7	18H7 / 0.71H7	22H7 / 0.47H7
Width of guide block		mm / inch	18 / 0.71	18 / 0.71	18 / 0.71
Clamping method / pressure		MPa / psi	Hydraulic 5 / 725	Hydraulic 5 / 725	Hydraulic 3.5 / 507.5
Clamping torque		N.m / ft. lbs.	5700 / 4204.11 4500 / 3319	4500 / 3319.03	5200 / 3835.32
Servo motor spec			refer to page 71		
Transmission ratio			1 / 180	1 / 180	1 / 180
Max. table speed / at specified servo motor speed		min^{-1}	11.1 / 2000	11.1 / 2000	11.1 / 2000
Allowable loading inertia $(\frac{W.D^2}{8})$		$kg.m^2$	25	40.5	122.4
Resolution		deg.	0.001	0.001	0.001
Indexing accuracy		sec.	15	15	15
Repeatability		sec.	6	6	6
Net weight (servo motor excluded)		kg / lb	396 / 871.2 455 / 1001	720 / 1584.0	1236 / 2719.2
Allowable loading capacity	Vertical	kg / lb	450 / 990	450 / 990	800 / 1760
	Horizontal	kg / lb	800 / 1760	800 / 1760	1500 / 3300
	Rotary Tailstock applied	kg / lb	800 / 1760	800 / 1760	1500 / 3300
FxL When table clamped	F	N / lbs	45000 / 10098	49000 / 10780	50000 / 11000
	FXL	N.m / ft. lbs.	8300 / 6121.7	8500 / 6264.50	10000 / 7370.0
	FXL	N.m / ft. lbs.	5700 / 4204.11 4500 / 3319	4500 / 3316.5	5200 / 3832.4
Allowable cutting torque		N.m / ft. lbs.	2500 / 1842.5	4300 / 3169.1	6860 / 5059.6

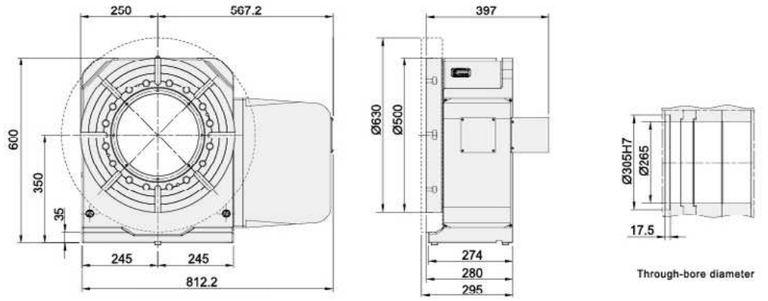
Note: 1. Allowable cutting torque at table speed of 1 min^{-1}.
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

DIMENSIONAL DRAWINGS

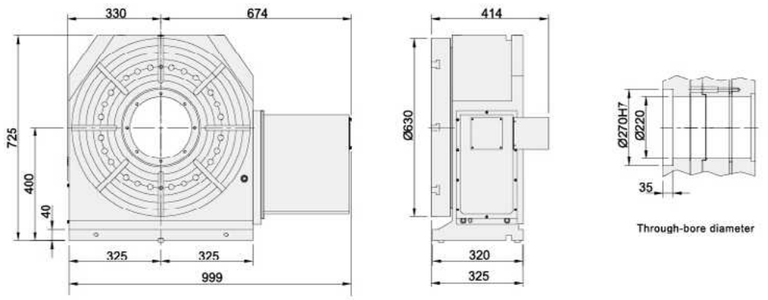
Unit : mm

GXA-500H

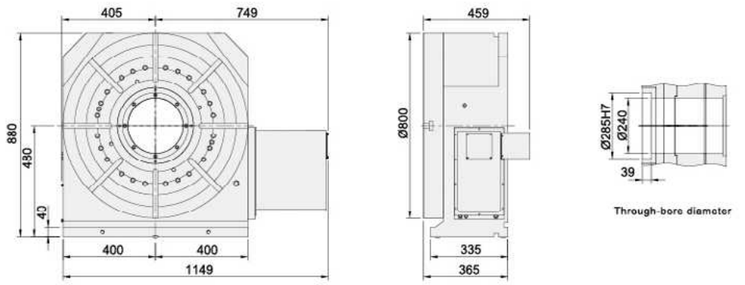
▲ GXA-630EH



GX-630H



GX-800H



Note: The length of servo guard may vary with servo motor type.
(metal sheet dimensions shown above are based on Fanuc motor)

CNC Rotary Table

High - Power Clamp, Motor at Left

G X A - 1 7 0 S L

- G: worm gear transmission
- X: Vertical & horizontal application
- V: Vertical application
- A: new optimization mode I
- 170: Table size
- S: Super multiple pneumatic
- H: Hydraulic
- L: Motor mounted at left side of table

- Worktable diameter Ø170, Ø210, Ø255.
- Motor mounted at left side of table
- Full gear depth transmitted by dual lead worm drive, resulting in higher efficiency and lower backlash. (P.20)

SPECIFICATIONS

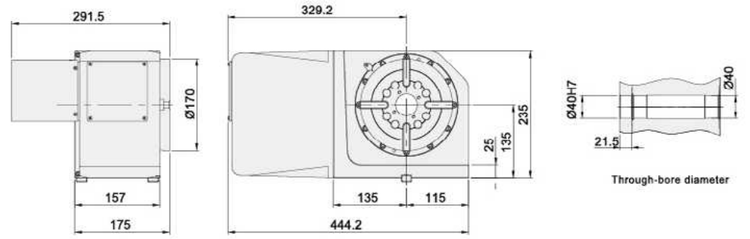
MODEL		Unit	GXA-170SL	GVA-210SL	GXA-255HL
Worktable diameter		mm / inch	Ø170 / Ø 6.69	Ø210 / Ø 8.27	Ø255 / Ø10.04
Center bore diameter		mm / inch	Ø40H7 / Ø 1.57H7	Ø65H7 / Ø 2.56H7	Ø140H7 / Ø 5.51H7
Through-bor diameter		mm / inch	Ø40 / Ø 1.57H7	Ø65 / Ø 2.56H7	Ø100 / Ø 3.94
Height of table (horizontal)		mm / inch	175 / 6.89	–	210 / 8.27
Height of table (vertical)		mm / inch	135 / 5.31	160 / 6.3	190 / 7.48
Width of T-slot		mm / inch	12H7 / 0.47H7	12H7 / 0.47H7	12H7 / 0.47H7
Width of guide block		mm / inch	18 / 0.71	18 / 0.71	18 / 0.71
Clamping method / pressure		Mpa / psi	Pneumatic 0.55 ~ 0.7 / 79.8-101.5	Pneumatic 0.55 ~ 0.7 / 79.8-101.5	Hydraulic 5 / 725
Clamping torque		N.m / ft. lbs.	300 / 221.1	400 / 294.8	900 / 663.3
Servo motor spec				refer to page 71	
Transmission ratio			1 / 60	1 / 72	1 / 120
Max. table speed / at specified servo motor speed		min^{-1}	53.3 / 3200	53.3 / 3840	22.2 / 2000
Allowable loading inertia	$(\frac{W.D^2}{8})$	$kg.m^2$	0.72	1.38	2.43
Resolution		deg.	0.001	0.001	0.001
Indexing accuracy		sec.	20	20	15
Repeatability		sec.	6	6	6
Net weight (servo motor excluded)		kg / lb	51.5 / 113.3	60 / 132	114 / 251
Allowable loading capacity	Vertical	kg / lb	100 / 220	125 / 275	150 / 330
	Horizontal	kg / lb	200 / 440	–	300 / 660
	Rotary Tailstock applied	kg / lb	200 / 440	250 / 550	300 / 660
FxL When table clamped	F	N / lbs	14000 / 3141.6	17000 / 3814.8	20000 / 4488
	FXL	N.m / ft. lbs.	1020 / 751.74	1265 / 932	1700 / 1252.9
	FXL	N.m / ft. lbs.	300 / 221.1	400 / 294.8	900 / 663.3
Allowable cutting torque		N.m / ft. lbs.	200 / 147.41	260 / 191.62	550 / 405.35
Allowable Max. rotary joint quantity			4	4	6

Note: 1. Allowable cutting torque at table speed of 1 min^{-1}.
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

DIMENSIONAL DRAWINGS

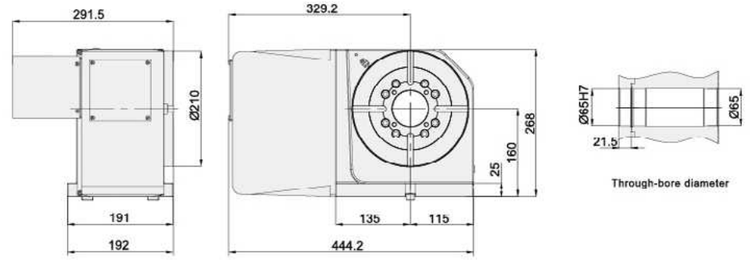
Unit : mm

GXA-170SL



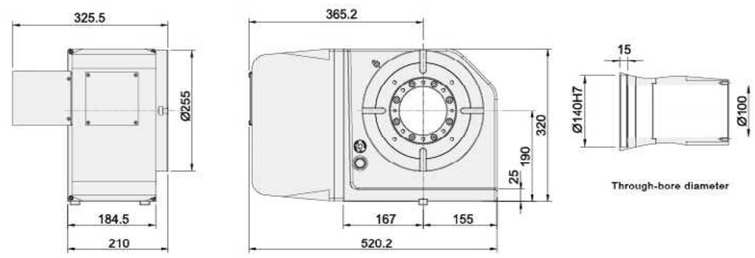
Equipped with upgraded high precision cross roller bearing.

GVA-210SL



Equipped with upgraded high precision cross roller bearing.

GXA-255HL



Consolidated spindle with YRT bearing built-in.

Note: The length of servo guard may vary with servo motor type.
(metal sheet dimensions shown above are based on Fanuc motor)

CNC Rotary Table

High - Power Clamp, Motor at Back

GVA - 210SB

- GVA: Worm gear transmission
- GVA: Veritcal applicatiion
- GVA: new optimization model
- 210: Table size
- S: Super multiple pneumatic
- H: Hydraulic
- B: Motor mounted at backside of table

- Worktable diameter Ø170, Ø210 ,Ø255.
- GVA-SB series is new "super multiple brake" mechanism for pneumatic clamp.(P.19)
- Full gear depth transmitted by dual lead worm drive, resulting in higher efficiency and lower backlash.(P.20)

SPECIFICATIONS

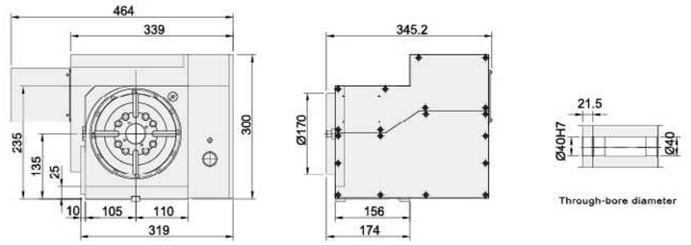
MODEL		Unit	GV-170SB	GVA-210SB	GVA-255HBII
Worktable diameter		mm / inch	Ø170 / Ø6.69	Ø210 /Ø 8.27	Ø255 / Ø10.04
Center bore diameter		mm / inch	Ø40H7 / Ø1.57H7	Ø65H7 / Ø2.6H7	Ø140H7 / Ø 5.51H7
Height of center (vertical)		mm / inch	135 / 5.31	160 / 6.30	190 / 7.48
Width of T-slot		mm / inch	12H7 / 0.47H7	12H7 / 0.47H7	12H7 / 0.47H7
Width of guide block		mm / inch	18 / 0.71	18 / 0.71	18 / 0.71
Clamping method / pressure		Mpa / psi	Super Multi- Pneumatic 0.55 ~ 0.7 / 79.8 ~ 101.5	Super Multi- Pneumatic 0.55 ~ 0.7 / 79.8 ~ 101.5	Hydraulic 5 / 725
Clamping torque		N.m / ft. lbs.	250 / 184.25	400 / 294.8	900 / 663.3
Servo motor spec				refer to page 71	
Transmission ratio			1 / 90	1 / 90	1 / 120
Max. table speed / at specified servo motor speed		min^{-1}	44.4 / 4000	44.4 / 4000	22.2 / 2664
Allowable loading inertia	$(\frac{WD^2}{8})$	$kg.m^2$	0.28	0.68	1.21
Resolution		deg.	0.001	0.001	0.001
Indexing accuracy		sec.	20	20	15
Repeatability		sec.	6	6	6
Net weight (servo motor excluded)		kg / lb	90 / 198	84 / 184.8	149 / 328
Allowable loading capacity	Vertical	kg / lb	75 / 165	125 / 275	150 / 330.0
	Rotary Tailstock applied	kg / lb	150 / 330	250 / 550	300 / 660
FxL When table clamped	F	N / lbs	14000 / 3141.60	17000 / 3814.8	20000 / 4488
	FXL	N.m / ft. lbs.	1020 / 751.74	1265 / 932.3	1700 / 1253.0
	FXL	N.m / ft. lbs.	250 / 184.25	400 / 294.80	900 / 663.3
Allowable cutting torque		N.m / ft. lbs.	170 / 125.29	260 / 191.62	550 / 405.35

Note: 1. Allowable cutting torque at table speed of 1 min^{-1}.
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

DIMENSIONAL DRAWINGS

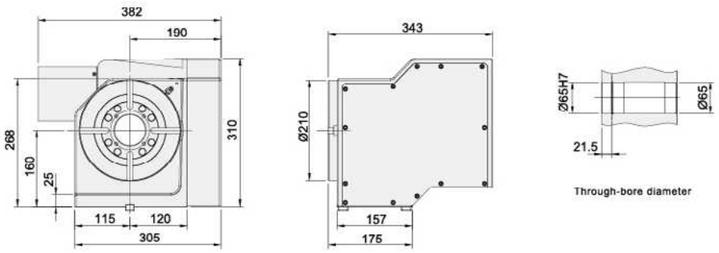
Unit : mm

GV-170SB



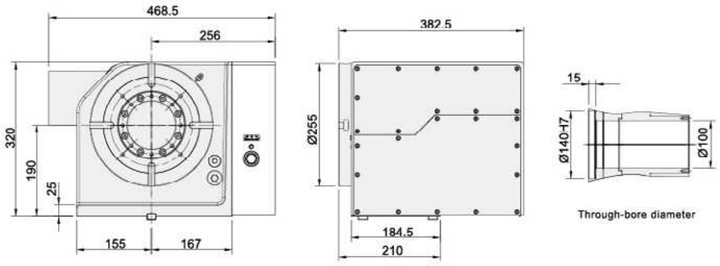
Equipped with upgraded high precision cross roller bearing.

GVA-210SB



Equipped with upgraded high precision cross roller bearing.

GVA-255HBII



Consolidated spindle with YRT bearing built-in.

Note: The length of servo guard may vary with servo motor type.
(metal sheet dimensions shown above are based on Fanuc motor)

CNC Index Table

C X - 2 5 5 H

- Hydraulic brake
- Table size
- Veritcal & Horizontal applicatiion
- Coupling (3 pcs type) with worm gear transmission

- Worktable diameter Ø255, Ø320, Ø400, Ø500.
- Motor is mounted at right side (vertical and horizontal applications).
- Equipped with three pieces type coupling with worm gear to achieve positioning. It is suitable for heavy cutting.
- The minimum degree is 1°.

Equipped with 3-pcs coupling

SPECIFICATIONS

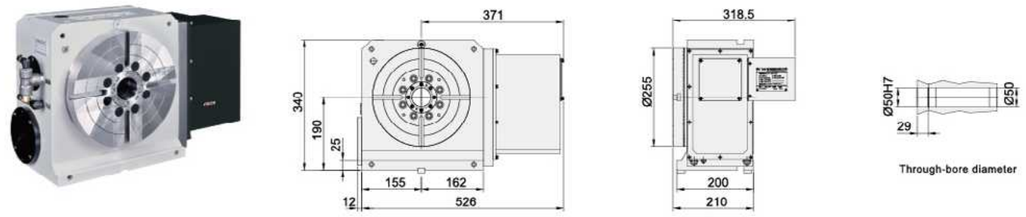
MODEL		Unit	CX-255H	CX-320H	CX-400H	CX-500H
Worktable diameter		mm / inch	Ø255 / Ø10.04	Ø320 / Ø12.60	Ø400 / Ø15.75	Ø500 / Ø19.69
Center bore diameter		mm / inch	Ø50H7 / Ø1.97H7	Ø70H7 / Ø2.76H7	Ø110H7 / Ø4.33H7	Ø130H7 / Ø5.12H7
Through-bore diameter		mm / inch	Ø50 / Ø1.97	Ø70 / Ø2.76	Ø110 / Ø4.33	Ø130 / Ø5.12
Height of table (horizontal)		mm / inch	210 / 8.27	235 / 9.25	255 / 10.04	281 / 11.06
Height of center (vertical)		mm / inch	190 / 7.48	210 / 8.27	255 /10.04	310 / 12.20
Width of T-slot		mm / inch	12H7 / 0.47H7	14H7 / 0.55H7	14H7 / 0.55H7	18H7 /0.71H7
Width of guide block		mm / inch	18 / 0.71	18 / 0.71	18 / 0.71	18 / 0.71
Clamping method / pressure		MPa / psi	Hydraulic 3.5 / 508	Hydraulic 3.5 / 508	Hydraulic 3.5 / 508	Hydraulic 3.5 / 508
Clamping torque		N.m / ft. lbs.	3000 / 2211	4000 / 2948	5000 / 3685	10000 / 7370
Servo motor spec			refer to page 71			
Transmission ratio			1 / 120	1 / 120	1 / 144	1 / 180
Max. table speed / at specified servo motor speed		min^{-1}	22.2 / 2664	22.2 / 2664	11.1 / 1600	11.1 / 2000
Allowable loading inertia	$(\frac{W.D^2}{8})$	$kg.m^2$	2.48	4.57	10.2	19.1
Resolution		deg.	1°	1°	1°	1°
Indexing accuracy		sec.	8	8	8	8
Repeatability		sec.	2	2	2	2
Net weight (servo motor excluded)		kg / lb	134 / 295	186 / 410	350 / 771	450 / 992
Allowable loading capacity	Vertical	kg / lb	125 / 275	175 / 385	200 / 440	400 / 880
	Horizontal	kg / lb	300 / 660	350 / 770	500 / 1100	600 / 1320
	Rotary Tailstock applied	kg / lb	300 / 660	400 / 880	500 / 1100	600 / 1320
FxL When table clamped	F	N / lbs	16000 / 3590.4	20000 / 4488.0	30000 / 6732.0	40000 / 8976.0
	FXL	N.m / ft. lbs.	1750 / 1289.75	2500 / 1842.5	3000 / 2211.0	6000 / 4422.0
	FXL	N.m / ft. lbs.	3000 / 2211.0	4000 / 2948.0	5000 / 3685.0	10000 / 7370.0
Drive torque		N.m / ft. lbs.	240 / 176.9 (motor α iF4) 480 / 353.8 (motor α iF8)	720 / 530.2	864 / 618.5	1080 / 795.3

Note: 1.Drive torque is the torque output by the motor at the maximum speed of the worktable.
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

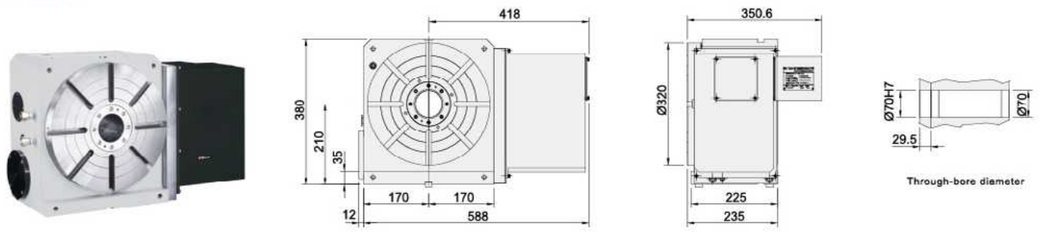
DIMENSIONAL DRAWINGS

Unit : mm

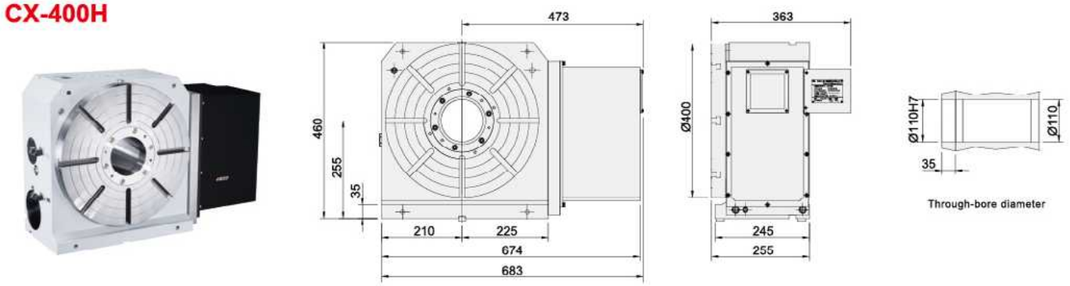
CX-255H



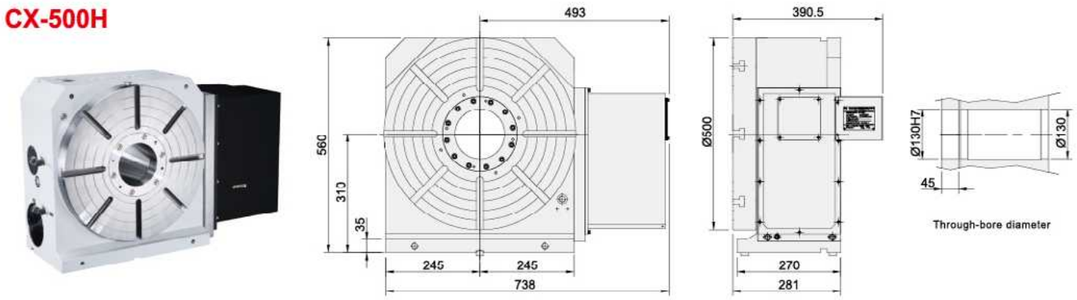
CX-320H



CX-400H



CX-500H

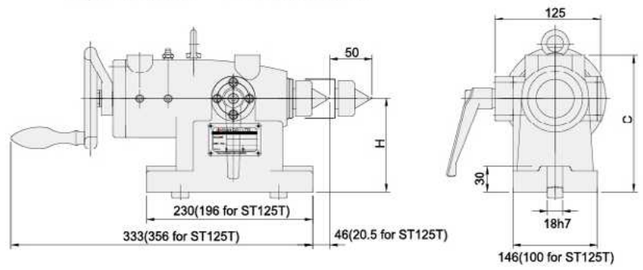


Note: The length of servo guard may vary with servo motor type.
(metal sheet dimensions shown above are based on Fanuc motor)

Quill Tailstock

S T - 1 7 0 T P

- P Pneumatic drive
- H Hydraulic drive
- With morse taper
- Quill Tailstock
- Table size: Ø170



unit: mm/inch

MODEL	ST-125T	ST-170T	ST-210T	ST-255T	ST-320T	ST-400T
H	110 / 4.33	135 / 5.31	160 / 6.30	190 / 7.48	210 / 8.27	255 / 10.04
C	161 / 6.34	183 / 7.20	208 / 8.19	238 / 9.37	258 / 10.16	306 / 12.05
Weight(Kg / lb)	16 / 35.2	22 / 48.4	24 / 52.8	26 / 57.2	28 / 61.6	31 / 68.2

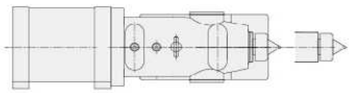
Pneumatic Quill Tailstock

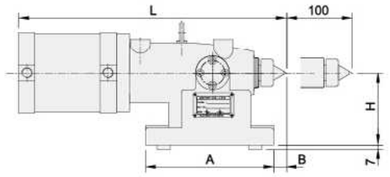
Pneumatic manual switch valve (optional)

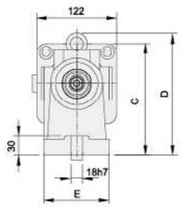
Hydraulic Quill Tailstock

ST-255TH | ST-320TH | ST-400TH

Hydraulic manual switch valve (optional)







unit: mm/inch

MODEL	ST-125TP	ST-170TP	ST-210TP	ST-255TH	ST-320TH	ST-400TH
H	110 / 4.33	135 / 5.31	160 / 6.3	190 / 7.48	210 / 8.27	255 / 10.04
C	171 / 6.73	196/ 7.72	221 / 8.70	238 / 9.37	258 / 10.16	306 / 12.05
A	196 / 7.72	230 / 9.06	230/ 9.06	230/ 9.06	230/ 9.06	230/ 9.06
B	23 / 0.91	48.5 / 1.91	48.5 / 1.91	46 / 1.81	46 / 1.81	46 / 1.81
D	191 / 7.52	216 / 8.5	241 / 9.49	271 / 10.67	291 / 11.46	336 /13.23
E	100 / 3.94	146 / 5.75	146 / 5.75	146 / 5.75	146 / 5.75	146 / 5.75
L	416.5 / 16.4	416.5 / 16.4	416.5 / 16.4	392 / 15.43	392 / 15.43	392 / 15.43
Weight(Kg / lb)	18 / 39.6	24 / 52.8	26 / 57.2	28 / 61.6	30 / 66	33 / 72.6

Note: 1. Max. operating pressure: 2MPa
2. Illustration stroke 100mm is for quill withdraw. The effective quill stroke is 50mm.
3. Quill stroke more than 50mm is an available option.

Rotary Tailstock

S R - 1 7 0 P

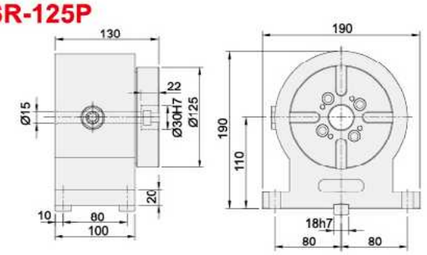
- P Pneumatic clamping
- H Hydraulic clamping
- Rotary tailstock
- Table size: Ø170

MODEL	SR-125P	SR-170P	SR-210P	SR-255H	SR-320H	SR-400H	SR-500H
Clamping torque (N.m)	70	130	130	400	400	1600	2400
Clamping method / pressure(MPa)	Pneumatic 0.55~0.7			Hydraulic 5			
Net weight (Kg)	20	28	33	58	70	140	265

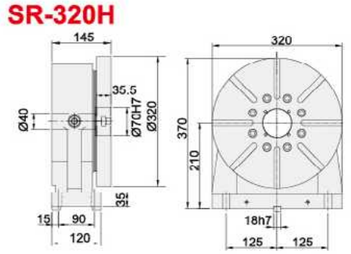
Note: SR rotary tailstock without brake is available, please contact the local agent for application info.

DIMENSIONAL DRAWINGS

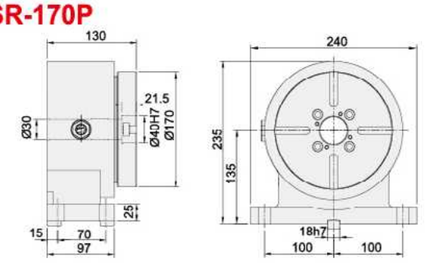
SR-125P



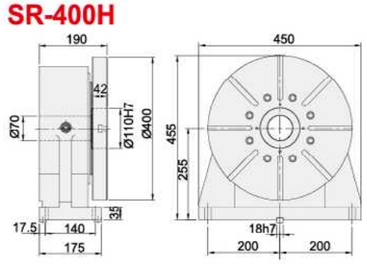
SR-320H



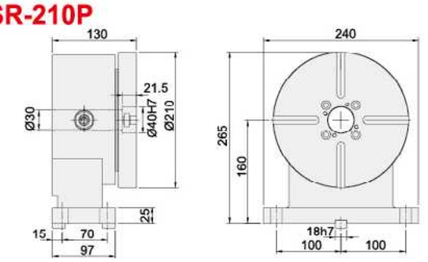
SR-170P



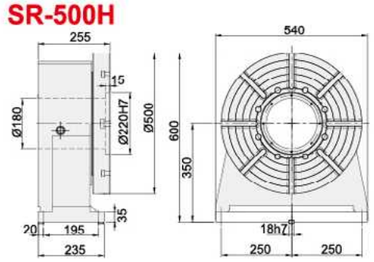
SR-400H



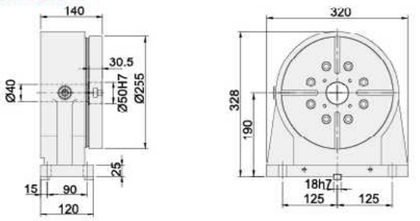
SR-210P



SR-500H



SR-255H



CNC Tilting Rotary Table

GFA - 125S

- new optimization model
- Five axes
- Worm gear transmission
- Table size
- Super pneumatic for multiple clamp force

- Worktable diameter Ø100, Ø125, Ø170, Ø210.
- Exclusive patented dual pneumatic piston braking system.(P.19)
- Enlarged the high precision cross roller bearing.
- Transmitted by dual lead worm with high efficiency and full depth gear teeth.(P.20)

Equipped with upgraded high precision cross roller bearing.

SPECIFICATIONS

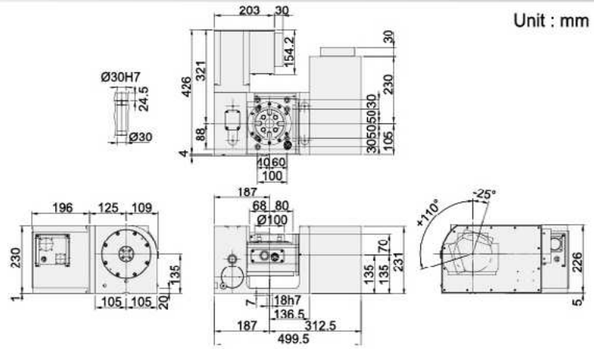
MODEL		Unit	GFA-101S		GFA-125S		GFA-170SII/HII		GFA-210S/H	
Worktable diameter		mm / inch	Ø100 / Ø3.94		Ø125 / Ø4.92		Ø170 / Ø6.69		Ø210 / Ø8.27	
Center bore diameter		mm / inch	Ø30H7 / Ø1.18H7		Ø30H7 / Ø1.18H7		Ø40H7 / Ø1.57H7		Ø65H7 / Ø2.56H7	
Height of table (horizontal)		mm / inch	205 / 8.07		224.5 / 8.84		260 / 10.24		280 / 11.02	
Height of center (vertical)		mm / inch	135 / 5.31		160 / 6.30		190 / 7.48		210 / 8.27	
Width of T-slot		mm / inch	12H7 / 0.47H7		12H7 / 0.47H7		12H7 / 0.47H7		12H7 / 0.47H7	
Width of guide block		mm / inch	18 / 0.71		18 / 0.71		18 / 0.71		18 / 0.71	
Clamping method /pressure		MPa / psi	P:0.55~0.7/79.8~101.5		P:0.55~0.7/79.8~101.5		P:0.55~0.7/79.8~101.5 H:2.5/363		P:0.55~0.7/79.8~101.5 H:2.5/363	
Servo motor spec			refer to page 71							
Transmission ratio			R	T	R	T	R	T	R	T
			1:75	1:120	1:90	1:90	1:90	1:90	1:90	1:90
Max. table speed / at specified servo motor speed		min^{-1}	33.3 / 2500	16.6 / 2000	44.4 / 4000	44.4 / 4000	33.3 / 3000	22.2 / 2000	33.3 / 3000	22.2 / 2000
Clamping torque		N.m / ft. lbs.	200 / 148	250 / 184	140 / 103	300 / 221	300 / 221 450 / 332	400 / 295 700 / 516	400 / 295 600 / 443	600 / 443 800 / 590
Allowable loading capacity	In Horizontal	kg / lb	35 / 77		50 / 110		75 / 165		100 / 220	
	In Tilting (0~90°)	kg / lb	20 / 44		35 / 77		50 / 110		70 / 154	
Allowable unbalancing work moment	WxL	N.m / ft. lbs.	24 / 17.69		24 / 17.69		40 / 29.5		62 / 45.7	
FxL When table clamped	F	N / lbs	4000 / 897.60		4000 / 897.60		7000 / 1570.8		14000 / 3141.6	
	FxL	N.m / ft. lbs.	200 / 147.4		140 / 103.2		300 / 221 450 / 332		400 / 295 600 / 443	
	FxL	N.m / ft. lbs.	250 / 184.25		300 / 221.1		400 / 295 700 / 516		600 / 443 800 / 590	
Allowable loading inertia	$(\frac{W.D^2}{8})$	$kg.m^2$	0.044		0.1		0.28		0.55	
Resolution		deg.	0.001		0.001		0.001		0.001	
Indexing accuracy		sec	40"	60"	40"	60"	20"	60"	20"	60"
Repeatability		sec	6"	8"	6"	8"	6"	8"	6"	8"
Tilting angle range		deg.	-25 ~ +110		-30 ~ +120		-30 ~ +120		-30 ~ +120	
Net weight (servo motor excluded)		kg / lb	90 / 198		120 / 264		180 / 396		230 / 490.6	
Allowable cutting torque		N.m / ft. lbs.	85 / 62.65		85 /62.65		200 / 147.4		250 / 184.25	
Allowable Max. rotary joint quantity		Port	–		3		4		4	

Note: 1. R: Rotary Axis T: Tilt Axis
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

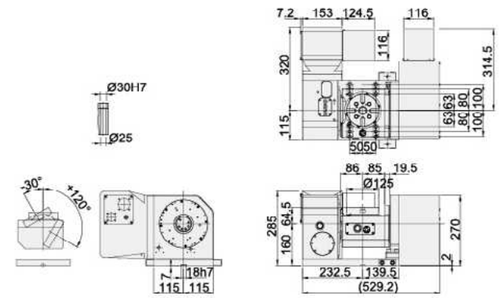
DIMENSIONAL DRAWINGS

Unit : mm

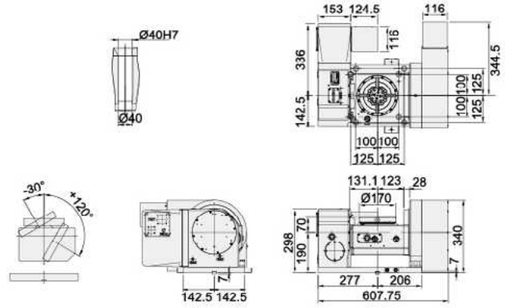
GFA-101S



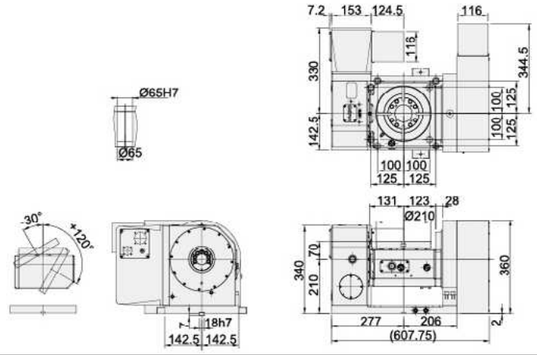
GFA-125S



GFA-170SII/HII



GFA-210S/H



Note: 1. The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown at above are based on Fanuc motor)
2. Allowable wheel torque at table speed of 1 min^{-1}.
3. According to application engineering, optical encoder is recommended for tilting axis.

CNC Tilting Rotary Table

G F A - 2 5 5 H(B)

- G F A: Worm gear transmission
- -: new optimization model
- 2: Five axes
- 5 5: Table size
- H: Hydraulic brake
- (B): Tilting motor mounted at the back of table

- Worktable diameter Ø255, Ø320.
- The hydraulic brake equipped with radial and axial bearings.(P.18)
- Full gear depth transmitted by dual lead worm drive, resulting in higher efficiency and lower backlash.(P.20)

Consolidated spindle with radial-Axial bearing built-in.

SPECIFICATIONS

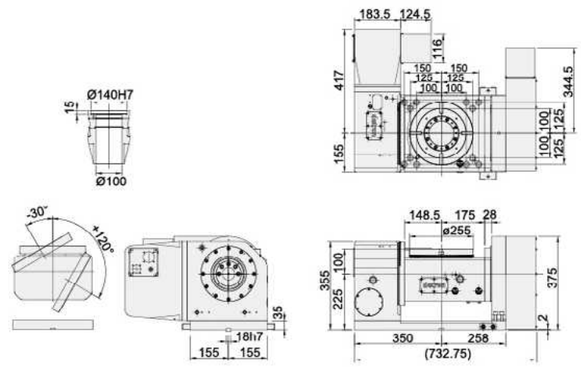
MODEL		Unit	GFA-255H/HB		GFA-320H	
Worktable diameter		mm / inch	Ø255 / Ø10.04		Ø320 / Ø12.60	
Center bore diameter		mm / inch	Ø140H7 / Ø5.51H7		Ø180H7 / Ø7.09H7	
Height of table (horizontal)		mm / inch	325 / 12.8		355 /13.98	
Height of center (vertical)		mm / inch	225 / 8.86		255 / 10.04	
Width of T-slot		mm / inch	12H7 / 0.47H7		14H7 / 0.55H7	
Width of guide block		mm / inch	18 / 0.71		18 / 0.71	
Clamping method /pressure		MPa / psi	Hydraulic 5 / 725.0		Hydraulic 5 / 725.0	
Servo motor spec			refer to page 71			
Transmission ratio			R	T	R	T
			1:90	1:120	1:120	1:120
Max. table speed / at specified servo motor speed		min^{-1}	22.2 / 2000	16.6 / 2000	22.2 / 2664	16.6 / 2000
Clamping torque		N.m / ft. lbs.	900 / 663.8	900 / 663.8	1600 / 1179.2	1600 / 1179.2
Allowable loading capacity	In Horizontal	kg / lb	120 / 264		200 / 440	
	In Tilting (0~90°)	kg / lb	90 / 166.33		150 / 330	
Allowable unbalancing work moment	WxL	N.m / ft. lbs.	92 / 68		130 / 95.8	
FxL When table clamped	F	N / lbs	16000 / 3590.40		20000 / 4488.0	
	FxL	N.m / ft. lbs.	900 / 663.8		1600 / 1179.2	
	FxL	N.m / ft. lbs.	900 / 663.8		1600 / 1179.2	
Allowable loading inertia	$(\frac{W.D^2}{8})$	$kg.m^2$	0.98		2.6	
Resolution		deg.	0.001		0.001	
Indexing accuracy		sec	15"	50"	15"	50"
Repeatability		sec	6"	8"	6"	8"
Tilting angle range		deg.	-30 ~ +120		-30 ~ +120	
Net weight (servo motor excluded)		kg / lb	320 / 704 347 / 765		470 / 1037	
Allowable cutting torque		N.m / ft. lbs.	370 / 272.9		780 / 569.4	
Allowable Max. rotary joint quantity		Port	6 / 6		6	

Note: 1. R: Rotary Axis T: Tilt Axis
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

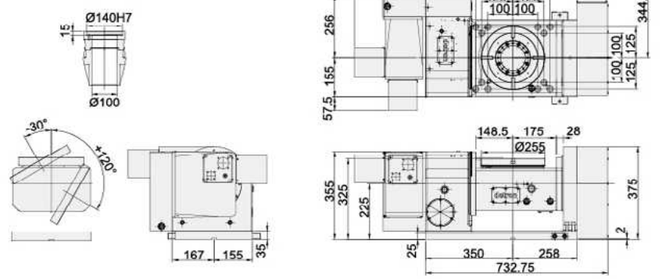
DIMENSIONAL DRAWINGS

Unit : mm

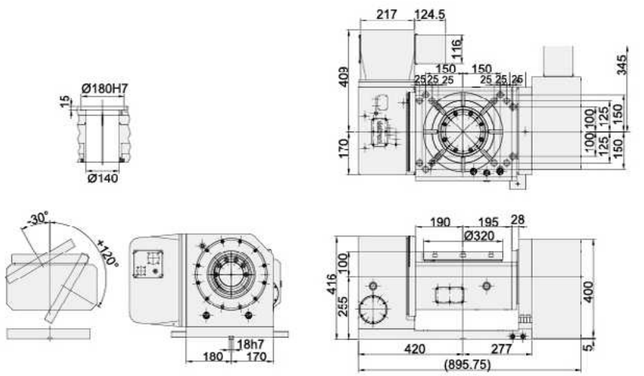
GFA-255H



GFA-255HB



GFA-320H



Note: 1. The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown at above are based on Fanuc motor)
2. Allowable wheel torque at table speed of I min^{-1}.
3. According to application engineering, optical encoder is recommended for tilting axis.

CNC Trunnion Tilting Rotary Table

G T F A E - 4 1 0 X B

- Worm gear transmission
- Trunnion type for lower gravity
- Five axis
- new optimization model
- Flat supplemental base for standard 3 axis M/C
- Table size
- Tilting motor mounted at the back of table
- X hydraulic clamp by air booster converter built-in
- S superior pneumatic clamp
- H hydraulic brake

- Worktable diameter Ø210, Ø320, Ø410, Ø500.
- The hydraulic brake equipped with radial and axial bearings.(P.18)
- Full gear depth transmitted by dual lead worm drive, resulting in higher efficiency and lower backlash.(P.20)
- Built-in air-booster for appointed models.

◀ Option type, motor mounted at the front side

◀ customized base available according to demand

SPECIFICATIONS

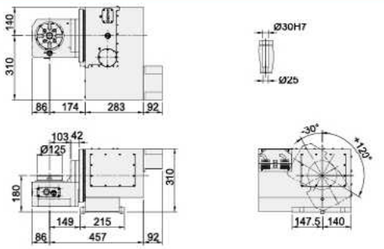
MODEL		Unit	GTFAS-125S	GTFAE-210S	GTFAE-320XB/H	GTFAE-410XB	GTFAE-500XB
Worktable diameter		mm / inch	Ø125 / Ø4.92	Ø210 / Ø8.27	Ø320 / Ø12.60	Ø410 / Ø16.14	Ø500 / Ø19.69
Center bore diameter		mm / inch	Ø30H7 / Ø1.18H7	Ø40H7 / Ø1.57H7	Ø50H7 / Ø1.97H7	Ø70H7 / Ø2.76H7	Ø70H7 / Ø2.76H7
Height of table (horizontal)		mm / inch	180 / 7.09	375 / 14.76	365 / 14.37 317 / 12.48	411 / 16.18	460 / 18.11
Height of center (vertical)		mm / inch	180 / 7.09	375 / 14.76	365 / 14.37 317 / 12.48	411 / 16.18	460 / 18.11
Width of T-slot		mm / inch	12H7 / 0.47H7	12H7 / 0.47H7	12H7 / 0.47H7	14H7 / 0.55H7	14H7 / 0.55H7
Clamping method /pressure		MPa / psi	*P: 0.5~0.6 / 72.5~87	*P: 0.55~0.7 / 79.7~101.5	*P:0.6~0.7/87~101.5 *H:5/725	*P: 0.6~0.7 / 87~101.5	*P: 0.6~0.7 / 87~101.5
Servo motor spec			refer to page 71				
Transmission ratio			R	T	R	T	R	T	R	T	R	T
			1:60	1:90	1:90	1:90	1:100	1:120	1:120	1:150	1:120	1:180
Max. table speed / at specified servo motor speed		min^{-1}	33.3 / 2000	22.2 / 2000	33.3 / 3000	22.2 / 2000	25 / 2500	16.6 / 2000	16.6 / 2000	11.1 / 1666	16.6 / 2000	11.1 / 2000
Clamping torque		N.m / ft. lbs.	140 / 103.26	900 / 663.8	400 / 295	600/442.48	750/553.17	1500/1106.25	1600/1180	2000/1475	2500/1843.75	3000/2212.5
Allowable loading capacity	In Horizontal	kg / lb	30 / 66		100 / 220		200 / 440		200 / 440		300 / 660	
	In Tilting (0~90°)	kg / lb	30 / 66		70 / 154.3		100 / 220		150 / 330		250 / 550	
Allowable unbalancing work moment	WxL	N.m / ft. lbs.	27 / 19.91		53 / 39.06		100 / 73.70		200 / 147.40		300 / 221.0	
FxL When table clamped	F	N / lbs	2800 / 629.5		14000 / 3141.60		16000 / 3590.40		20000 / 4488.0		30000 / 6732.0	
	FxL	N.m / ft. lbs.	140 / 103.26		400 / 295		750 / 553.17		1600 / 1180		2500 / 1843.75	
	FxL	N.m / ft. lbs.	900 / 663.8		600 / 442.48		1500 / 1106.25		2000 / 1475		3000 / 2212.5	
Allowable loading inertia	$(\frac{W.L^2}{8})$	$kg.m^2$	0.06		0.55		2.6		4.3		9.6	
Resolution		deg.	0.001		0.001		0.001		0.001		0.001	
Indexing accuracy		sec	40"	60"	20"	60"	20"	60"	15"	60"	15"	60"
Repeatability		sec	6"	8"	6"	8"	6"	8"	6"	8"	6"	8"
Tilting angle range		deg.	-30 ~ +120		-120 ~ +30		-120 ~ +30		-120 ~ +30		-120 ~ +30	
Net weight (servo motor excluded)		kg / lb	142 / 312.4		455 / 1001		700 / 1540 610 / 1342		940 / 2068.0		1270 / 2794	
Allowable cuting torque		N.m / ft. lbs.	85 / 62.69		260 / 191.6		550 / 401.5		780 / 569.4		1700 / 1241	
Allowable Max. rotary joint quantity		Port	-		4		6		6		6	

Note: 1. P: Pneumatic H:Hydraulic R: Rotary Axis T: Tilt Axis
2. For the motor model selection of GTFAS125S, please contact us.
3. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

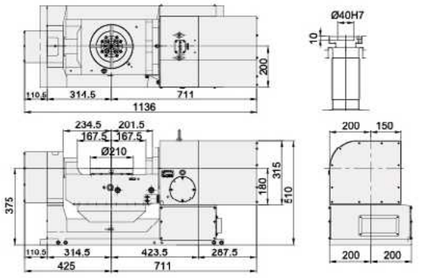
DIMENSIONAL DRAWINGS

Unit : mm

GTFAS-125S

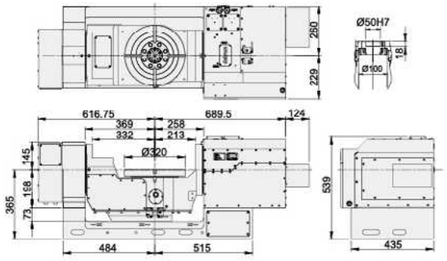


GTFAE-210S



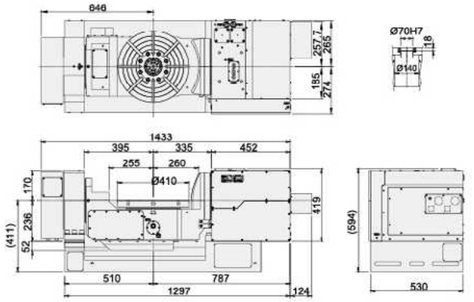
GTFAE-320XB

air-oil converter built-in



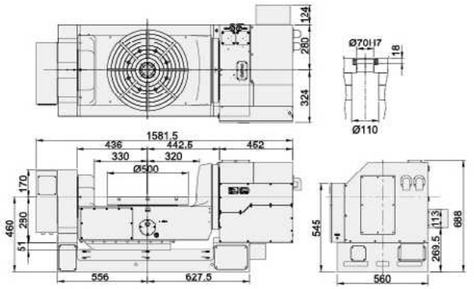
GTFAE-410XB

air-oil converter built-in



GTFAE-500XB

air-oil converter built-in



Note: 1. The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown at above are based on Fanuc motor)
2. Allowable wheel torque at table speed of 1 min^{-1}.
3. According to application engineering, optical encoder is recommended for tilting axis.
4. Customized table Ø630mm and dual drive at tilting axis are available.

CNC Trunnion Tilting Rotary Table

GTFAE-410XBLS

- Flat supplemental base for standard 3 axis M/C
- new optimization model
- Five axis
- Trunnion type for lower gravity
- Worm gear transmission
- with sub-table enlarged swing scope
- Tilting motor mounted at the back of table
- X hydraulic clamp by air booster converter built-in
- S superior pneumatic clamp
- H hydraulic brake
- Table size

- Worktable diameter, Ø255, Ø320, Ø410,Ø500.
- The hydraulic brake equipped with radial and axial bearings.(P.18)
- Full gear depth transmitted by dual lead worm drive, resulting in higher efficiency and lower backlash.(P.20)
- Enlarged swing to allow more working envelope.
- Sub- table available as "S" model.

GTFAE-410HL(S) with tilting axial motor at front.

SPECIFICATIONS

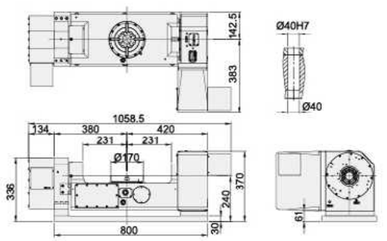
MODEL	Unit	GTFAE-170SL	GTFAE-255SBL(S)	GTFAE-320XBL(S)	GTFAE-410XBL(S)/ HL(S)	GTFAE-500XBL
Worktable diameter	mm / inch	Ø170 / Ø6.69	Ø255 / Ø10.455	Ø320 / Ø12.60	Ø410 / Ø16.14	Ø500 / Ø19.69
Center bore diameter	mm / inch	Ø40H7 / Ø1.57H7	Ø40H7 / Ø1.57H7	Ø50H7 / Ø1.97H7	Ø70H7 / Ø2.76H7	Ø70H7 / Ø2.76H7
Height of table (horizontal)	mm / inch	240 / 9.45	360 / 14.17	365 / 14.37	411 / 16.18 370 / 14.57	460 / 18.11
Height of center (vertical)	mm / inch	240 / 9.45	360 / 14.17	365 / 14.37	411 / 16.18 370 / 14.57	460 / 18.11
Width of T-slot	mm / inch	12H7 / 0.47H7	12H7 / 0.47H7	12H7 / 0.47H7	14H7 / 0.55H7	14H7 / 0.55H7
Clamping method /pressure	MPa / psi	P: 0.55~0.7 / 72.5~101.5	*P:0.55~0.7/ 72.5~101.5	*P: 0.6~0.7/ 87~101.5	*P:0.6~0.7/87~101.5 *H:5/725	*P: 0.6~0.7/ 87~101.5
Servo motor spec		refer to page 71				
Transmission ratio		R 1/90 T 1/90	R 1:90 T 1:120	R 1:100 T 1:120	R 1:120 THL(S) 1:150 1:120	R 1:120 T 1:180
Max. table speed / at specified servo motor speed	min^{-1}	22.2 / 2000 / 22.2 / 2000	22.2 / 2000 / 16.6 / 2000	25 / 2500 / 16.6 / 2000	16.6 / 2000 / 11.1 / 1665 1332	16.6 / 2000 / 11.1 / 2000
Clamping torque	N.m / ft. lbs.	300/221 / 400/294.7	400/295 / 600/442.48	750/553.17 / 1500/1106.25	1600/1180 / 2000/1475	2500/1843.75 / 3000/2212.5
Allowable loading capacity — In Horizontal	kg / lb	75 / 165	100 / 220	200 / 440	200 / 440	300 / 660
Allowable loading capacity — In Tilting (0~90°)	kg / lb	50 / 110	75 / 165	100 / 220	150 / 330	250 / 550
Allowable unbalancing work moment — WxL	N.m / ft. lbs.	40 / 29.5	53 / 39.06	100 / 73.7	200 / 147.40	300 / 221.0
FxL When table clamped — F	N / lbs	7000 / 1570.8	20000 / 4488.0	20000 / 4488.0	20000 / 4488.0	30000 / 6732.0
FxL When table clamped — FxL	N.m / ft. lbs.	300 / 221	400 / 295	750 / 553.17	1600 / 1180	2500 / 1843.75
FxL When table clamped — FxL	N.m / ft. lbs.	400 / 294.7	600 / 442.48	1500 / 1106.25	2000 / 1475	3000 / 2212.5
Allowable loading inertia $(\frac{W.D^2}{8})$	$kg.m^2$	0.28	0.55	2.6	4.3	9.6
Resolution	deg.	0.001	0.001	0.001	0.001	0.001
Indexing accuracy	sec	20" 60"	20" 60"	20" 60"	15" 60"	15" 60"
Repeatability	sec	6" 8"	6" 8"	6" 8"	6" 8"	6" 8"
Tilting angle range	deg.	-120 ~ +30	-120 ~ +30	-120 ~ +30	-120 ~ +30	-120 ~ +30
Net weight (servo motor excluded)	kg / lb	275 / 606.3	560 / 1235	750 / 1653	1020 / 2175 850 / 1860	1270 / 2800
Allowable cutting torque	N.m / ft. lbs.	200 / 147.4	250 / 182.5	550 / 401.5	780 / 569.4	1700 / 1241
Allowable Max. rotary joint quantity	Port	-	4	6	6	6

Note: 1. P: Pneumatic H:Hydraulic R: Rotary Axis T: Tilt Axis
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

DIMENSIONAL DRAWINGS

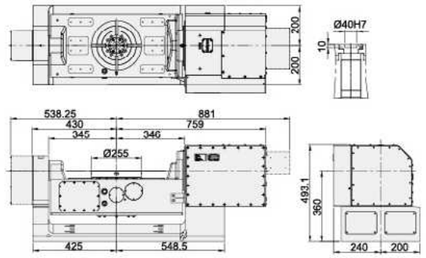
Unit : mm

GTFAE-170SL



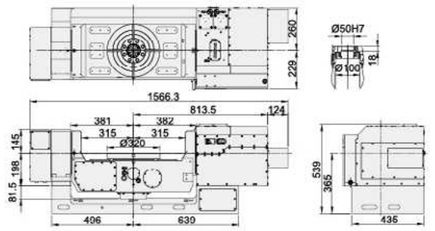
GTFAE-255SBL(S)

▲ sub table as available option



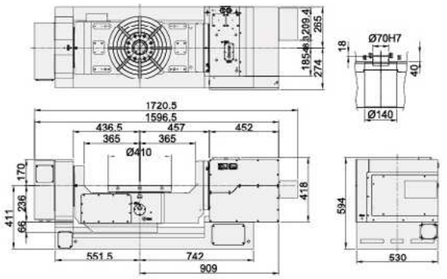
GTFAE-320XBL(S)

▲ sub table as available option



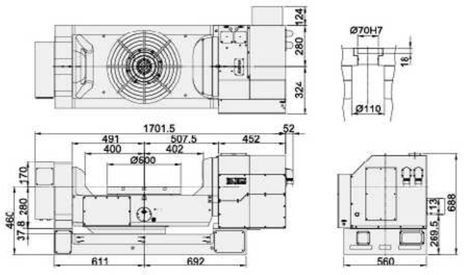
GTFAE-410XBL(S)

▲ sub table as available option



GTFAE-500XBL

▲ air-oil converter built-in

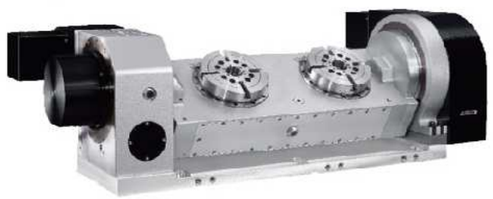


Note: 1. The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown at above are based on Fanuc motor)
2. Allowable wheel torque at table speed of 1 min^{-1}.
3. According to application engineering, optical encoder is recommended for tilting axis.
4. Customized table Ø630mm and dual drive at tilting axis are available.

Multi Spindle Tilting Rotary Table

G F A - 1 7 0 S - 2 W - 3 0 0

- G F A — Worm gear transmission
- new optimization model
- Five axes
- 170 — Table size
- S — Super pneumatic brake
- 2W — number of rotary axis
- 300 — rotary axis pitch



- Worktable diameter Ø125, Ø170
- Multiple rotary axis allow high volume production and automation integration.

SPECIFICATIONS

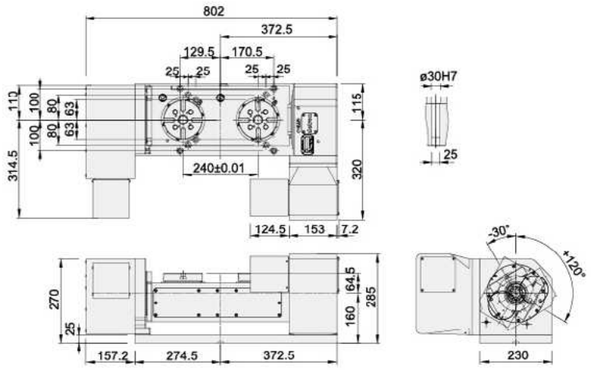
MODEL		Unit	GFA-125S-2W-240		GFA-170S-2W-300	
Worktable diameter		mm / inch	Ø125 / Ø4.92		Ø170 / Ø6.69	
Center bore diameter		mm / inch	Ø30H7 / Ø1.18H7		Ø40H7 / Ø1.57H7	
Pitch of rotary axis		mm / inch	240 / 9.45		300 / 11.81	
Max. work swing		mm / inch	195 / 7.68		285 / 11.22	
Height of table (horizontal)		mm / inch	224.5 / 8.84		250 / 9.84	
Height of center (vertical)		mm / inch	160 / 6.30		220 / 8.66	
Width of T-slot		mm / inch	12H7 / 0.47H7		12H7 / 0.47H7	
Width of guide block		mm / inch	18 / 0.71		18 / 0.71	
Drive pressure / method		MPa / psi	Pneumatic 0.55~0.7 / 79.8~101.5		Pneumatic 0.55~0.7 / 79.8~101.5	
Servo motor spec			refer to page 71			
Transmission ratio			R	T	R	T
			1/90	1/90	1/90	1/90
Max. table speed / at specified servo motor speed		min^{-1}	22.2 / 2000	22.2 / 2000	25 / 2250	22.2 / 2000
Clamping torque		N.m / ft. lbs.	140 / 103.26	300 / 221	300 / 221.26	600 / 442.5
Allowable loading capacity	In Horizontal	kg / lb	35 / 77		40 / 88	
	In Tilting (0~90°)	kg / lb	20 / 44		30 / 66	
Allowable unbalancing work moment	WxL	N.m / ft. lbs.	24 / 17.688		62 / 45.728	
FxL When table clamped	F	N / lbs	2800 / 629.5		4900 / 1102	
	FxL	N.m / ft. lbs.	140 / 103.26		300 / 221.26	
	FxL	N.m / ft. lbs.	300 / 221		600 / 442.5	
Allowable loading inerta	$(\frac{W.D^2}{8})$	$kg.m^2$	0.1		0.15	
Resolution		deg.	0.001		0.001	
Indexing accuracy		sec	40"	60"	20"	60"
Repeatability		sec	6"	8"	6"	8"
Tilting angle range		deg.	-30 ~ +120		-30 ~ +120	
Net weight (servo motor excluded)		kg / lbs	172 / 379		355 / 783	
Allowable cutting torque		N.m / ft. lbs.	85 / 62.645		200 / 147.512	

Note: 1. R: Rotary Axis T: Tilt Axis
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

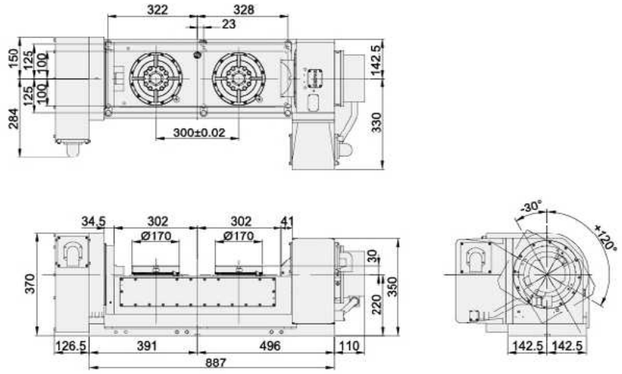
DIMENSIONAL DRAWINGS

Unit : mm

GFA-125S-2W-240



GFA-170S-2W-300



Note: 1. The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown at above are based on Fanuc motor)
2. Allowable wheel torque at table speed of 1 min^{-1}.
3. According to application engineering, optical encoder is recommended for tilting axis.

Multi Spindle Tilting Rotary Table

G T F A E - 2 1 0 S - 2 W - 3 2 0

- Flat supplemental base for standard 3 axis M/C
- new optimization model
- Five axes
- Trunnion type for lower gravity
- Worm gear transmission
- rotary axis pitch
- number of rotary axis
- Table size
- H hydraulic brake
- S Super pneumatic brake

- Worktable diameter Ø125, Ø210, Ø255
- Multiple rotary axis allow high volume production and automation integration.

SPECIFICATIONS

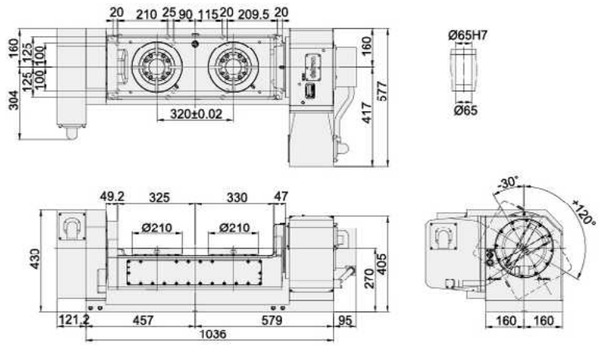
MODEL		Unit	GTFAE-210S-2W-320		GTFAE-255H-2W-400	
Worktable diameter		mm / inch	Ø210 / Ø8.27		Ø255 / Ø10.04	
Center bore diameter		mm / inch	Ø40H7 / Ø1.57H7		Ø40H7 / Ø1.57H7	
Pitch of rotary axis		mm / inch	320 / 12.60		400 / 15.75	
Max. work swing		mm / inch	310 / 12.20		390 / 15.35	
Height of table (horizontal)		mm / inch	270 / 10.63		370 / 14.57	
Height of center (vertical)		mm / inch	270 / 10.63		370 / 14.57	
Width of T-slot		mm / inch	12H7 / 0.47H7		12H7 / 0.47H7	
Width of guide block		mm / inch	18 / 0.71		18 / 0.71	
Drive pressure / method		MPa / psi	Pneumatic 0.55~0.7 / 79.8~101.5		Hydraulic 5 / 725.0	
Servo motor spec			refer to page 71			
Transmission ratio			R	T	R	T
			1/90	1/120	1/90	1/120
Max. table speed / at specified servo motor speed		min^{-1}	25 / 2250	22.2 / 2664	20 / 1800	16.2 / 2000
Clamping torque		N.m / ft. lbs.	400 / 295	900 / 663.8	900 / 663.8	2500 / 1843
Allowable loading capacity	In Horizontal	kg / lb	50 / 110		100 / 220	
	In Tilting (0~90°)	kg / lb	35 / 77		75 / 165	
Allowable unbalancing work moment	WxL	N.m / ft. lbs.	92 / 68		130 / 95.8	
FxL When table clamped	F	N / lbs	9800 / 2203		11000 / 2473	
	FxL	N.m / ft. lbs.	400 / 295		900 / 663.8	
	FxL	N.m / ft. lbs.	900 / 663.8		2500 / 1843	
Allowable loading inerta	$(\frac{W.D^2}{8})$	$kg.m^2$	0.22		0.8	
Resolution		deg.	0.001		0.001	
Indexing accuracy		sec	20"	60"	20"	60"
Repeatability		sec	6"	8"	6"	8"
Tilting angle range		deg.	-30 ~ +120		-30 ~ +120	
Net weight (servo motor excluded)		kg / lbs	440 / 970		856 / 1887	
Allowable cutting torque		N.m / ft. lbs.	250 / 184		550 / 405	

Note: 1. R: Rotary Axis T: Tilt Axis
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

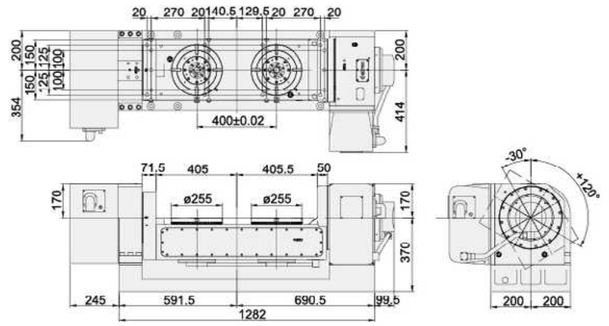
DIMENSIONAL DRAWINGS

Unit : mm

GTFAE-210S-2W-320

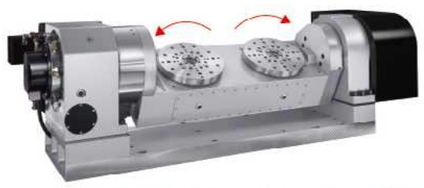


GTFAE-255H-2W-400



Hybrid Drive ►►►

GTFAE-255H-2WS-400



Individual rotations on each axis.

GDTF-500HB-2W-600

Rotary axis by DDM for 50rpm.
Tilting axis by worm wheel transmission.

Note: 1. The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown at above are based on Fanuc motor)
2. Allowable wheel torque at table speed of 1 min^{-1}.
3. According to application engineering, optical encoder is recommended for tilting axis.

Automatic Pallet Change System

CVR-660

- CVR: Double pallet system (C type)
- 6: Rack type
- 60: Pallet size

- EASY INSTALLATION: The pallet change device is directly mounted on the base. Easy to install and space saving.
- FLEXIBLE PRODUCTION: Available to equip with several tables to meet small lot flexible production requirements.
- GREAT LOADING CAPACITY: Hydraulic drive. Workpiece loading capacity up to 300kg x 2 pcs.
- HIGH REPEATABILITY: Employs high precision conical positioning blocks to ensure stability of table and repeatability in ± 0.005mm.

SPECIFICATIONS

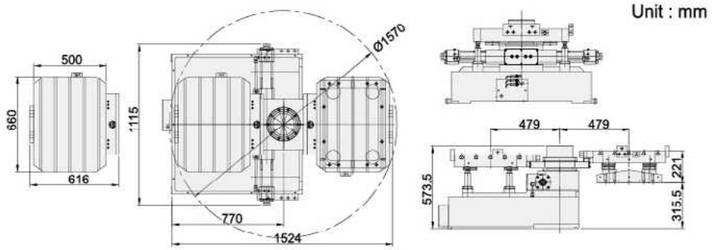
MODEL		Unit	CVR-660	CVR-850	CVR-10D
Pallet sizes		mm / inch	660 x 500 / 25.98 x 19.69	850 x 500 / 33.46 x 19.69	1000 x 500 / 39.37 x 19.69
Number of pallets			2	2	2
Pallet change method			180° Swing	180° Swing	180° Swing
T-slot size		mm / inch	14H8 / 0.55H8	18H8 / 0.71H8	18H8 / 0.71H8
Drive method /pressure		MPa / psi	Hydraulic 6 / 870	Hydraulic 6 / 870	Hydraulic 6 / 870
Pallet clamping force		N / lbs	36850 / 8269.14	36850 / 8269.14	36850 / 8269.14
Cutting load resistant capacity		N.m /ft. lbs.	2940 / 2166.78	2940 / 2166.78	2940 / 2166.78
Pallet positioning method			Taper cone	Taper cone	Taper cone
Allowable loading capacity		kg / lb	200 x 2 / 440 x 2	300 x 2 / 660 x 2	300 x 2 / 660 x 2
Allowable loading inertia		kg.m^2	7.5 x 2	7.5 x 2	7.5 x 2
Lifting force		N / lbs	35280 / 7916.83	35280 / 7916.83	35280 / 7916.83
Weight(N.W.)	Pallet exchange mechanism	kg / lb	550 / 1210	550 / 1210	550 / 1210
	Pallet	kg / lb	170x2 / 375x2	190 x 2 / 418 x 2	220 x 2 / 418 x 2
	Sub-pallet	kg / lb	105 / 231	105 / 231	105 / 231

NOTE: 1. Pallet change time may varied with flow of pump, length and diameter of pipe.
2. Allowable loading inertia means the allowable value at the distance of 450mm between the loading gravity and the APC center.

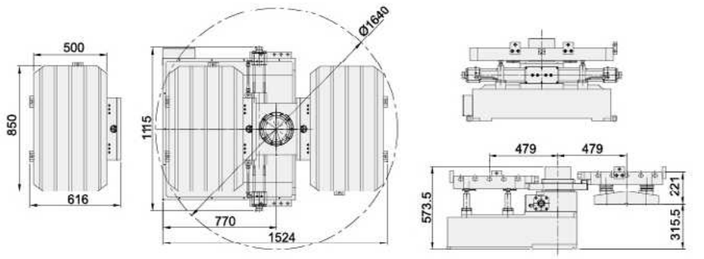
DIMENSIONAL DRAWINGS

Unit : mm

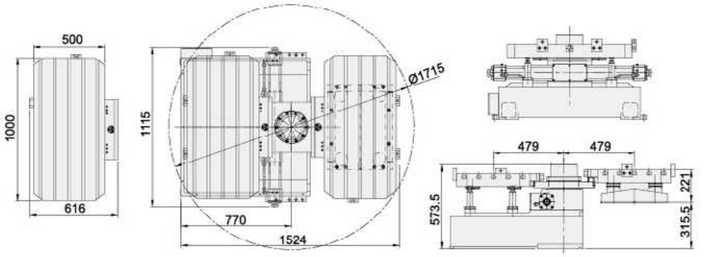
CVR-660



CVR-850



CVR-10D



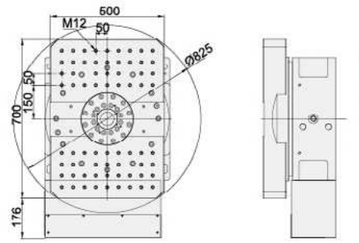
SVC series

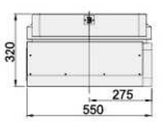
SVC-7050 II

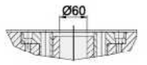
- SVC: Single pallet system (Column moving type)
- 7: Roller gear cam type
- 50: Pallet size
- II

- Roller cam transmission perform backlash free without wear-out and stabilizes fast pallet change.
- Applied for machining center with column movable. Change cycle in 3.5 sec.
- Driven by servo motor with encoder for accurate positioning.

Automatic Pallet Change System (Roller Gear Cam Type)





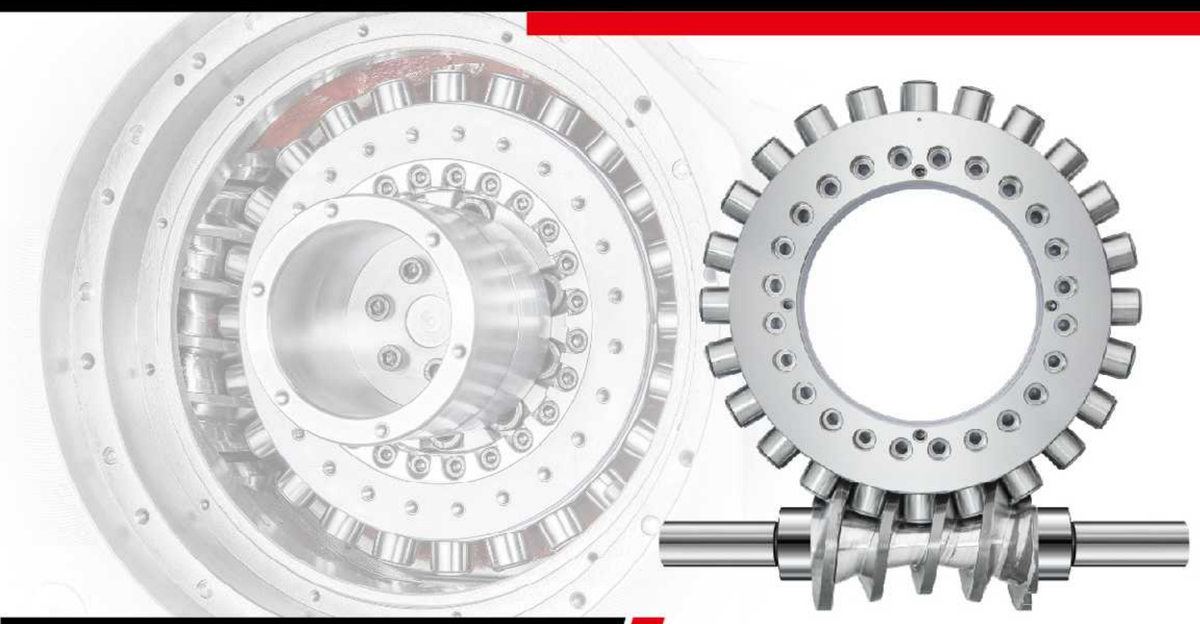


With flat structure

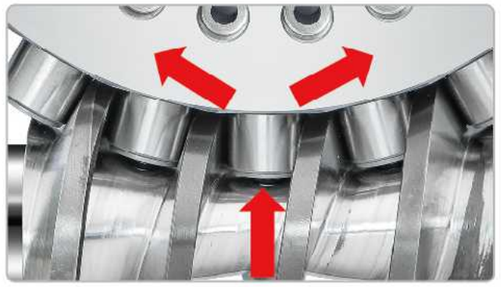
SVC-7050 II

SVC-10065 II

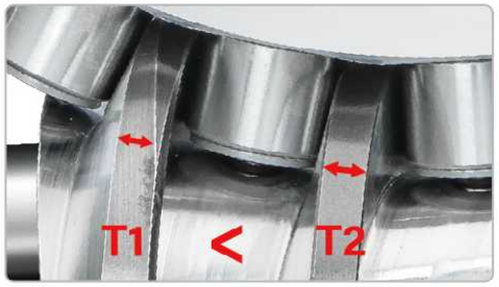
Zero-Backlash Roller Gear Cam Drive



Dual Lead Cam Shaft Mechanism



Preload adjustment can completely eliminate the engagement of roller and cam shaft to reach zero backlash and to ensure at least 4 rollers contacting cam shaft during rotation for high rigidity performance.



Dual Lead cam shaft design (T1<T2) ensures the meshing performance between rollers and the cam shaft, which significantly reduces vibration and improves surface processing accuracy.(Refer to P52)

Reliable Clamping Force

Hydraulic Model:
Special design of drum brake system.

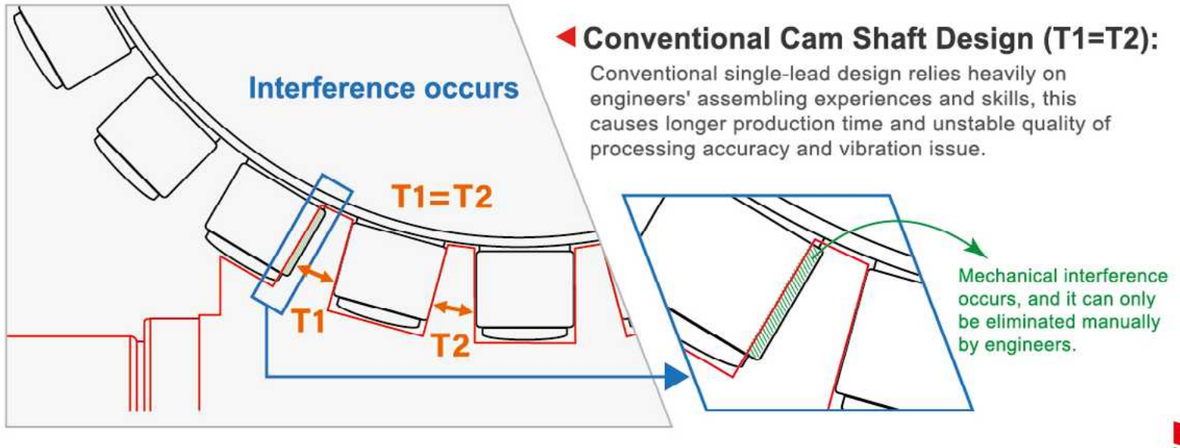
Pneumatic Model:
exclusive patented dual pistons design.

High Rigidity Consolidated Spindle

YRT bearing integrated in consolidated spindle with **least separate elements & premium rigidity.**

Core Technology

Dual Lead Cam Shaft Mechanism

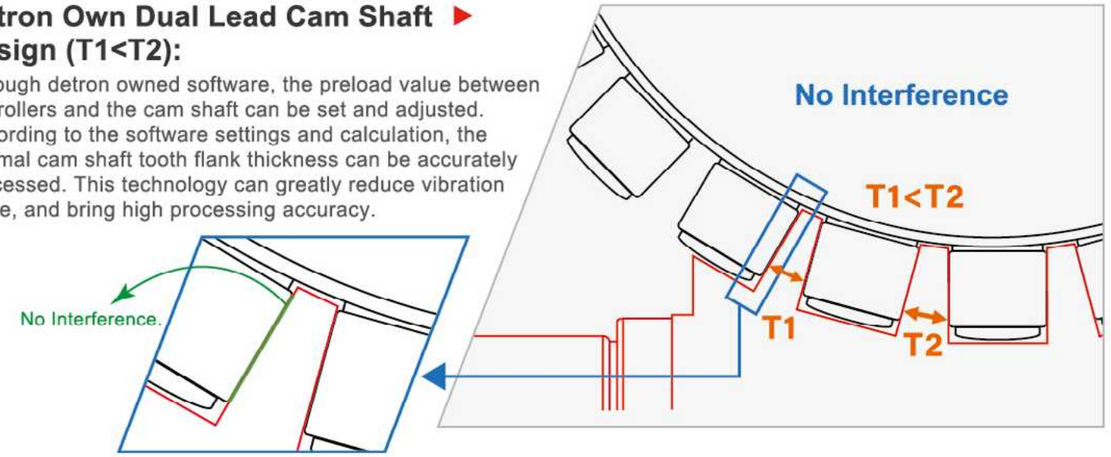


Conventional Cam Shaft Design (T1=T2):

Conventional single-lead design relies heavily on engineers' assembling experiences and skills, this causes longer production time and unstable quality of processing accuracy and vibration issue.

Detron Own Dual Lead Cam Shaft Design (T1<T2):

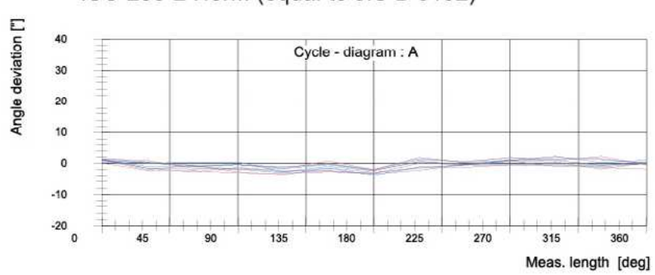
Through detron owned software, the preload value between the rollers and the cam shaft can be set and adjusted. According to the software settings and calculation, the optimal cam shaft tooth flank thickness can be accurately processed. This technology can greatly reduce vibration issue, and bring high processing accuracy.



Strict Inspection Norm

detron

ISO 230-2 Norm (equal to JIS B 6192)



Accuracy Inspection upon ISO 230-2 international norm is operated with 5 continuous runs in clockwise and counterclockwise test.

Roller Gear Cam Drive Rotary Table

RCX-170RS/H | RCX-210S/H | RCX-250ES/H | RCX-255H | RCX-320EH

RCX - 250(E)S

- S Super pneumatic brake
- H Hydraulic brake
- E Enlarged worktable
- R Reduced worktable
- Table diameter
- Vertical & horizontal application
- Roller cam drive

- Rolling contact reserves high rigidity, high speed and long endurance.
- Least drive energy wear-out and more than 80% transmission rate.
- Backlash-free from rolling motion achieves high accuracy.

SPECIFICATIONS

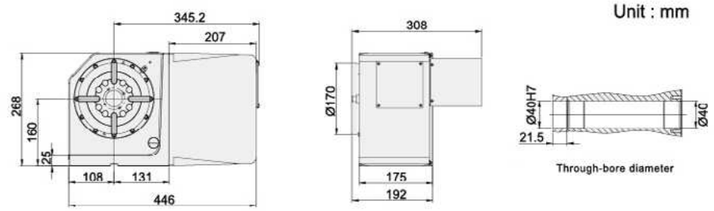
MODEL		Unit	RCX-170RS/H	RCX-210S/H RCX-250ES/H	RCX-255H	RCX-320EH
Worktable diameter		mm / inch	Ø170 / Ø6.69	Ø210 / Ø8.27 Ø250 / Ø9.84	Ø255 / Ø10.04	Ø320 / Ø12.6
Center bore diameter		mm / inch	Ø40H7 / Ø1.57H7	Ø40H7 / Ø1.57H7	Ø140H7 / Ø5.51H7	Ø140H7 / Ø5.51H7
Through-bore diameter		mm / inch	Ø40 / Ø1.57	Ø40 / Ø1.57	Ø100 / Ø3.9	Ø100 / Ø3.9
Height of table (horizontal)		mm / inch	192 / 7.6	192 / 7.6 207 / 8.15	216.5 / 8.5	222 / 8.7
Height of center (vertical)		mm / inch	160 / 6.30	160 / 6.30	190 / 7.49	190 / 7.49
Width of T-slot		mm / inch	12H7 / 0.47H7	12H7 / 0.47H7	12H7 / 0.47H7	12H7 / 0.47H7
Width of guide block		mm / inch	18 / 0.71	18 / 0.71	18 / 0.71	18 / 0.71
Clamping method /pressure		MPa / psi	Pneumatic 0.55~0.7 / 79.7~101.5	Pneumatic 0.55~0.7 / 79.7~101.5	Hydraulic 5 / 725	Hydraulic 5 / 725
Clamping torque		N.m / ft. lbs.	400 / 295 600 / 443	400 / 295 600 / 443	1270 / 937	1270 / 937
Servo motor spec			refer to page 54			
Transmission ratio			1 / 24	1 / 24	1 / 48	1 / 48
Max. table speed / at specified servo motor speed		min^{-1}	83.3 / 2000	83.3 / 2000	50 / 2400	50 / 2400
Standard loading inertia	$(\frac{W.D^2}{8})$	$Kg.m^2$	0.72	0.72	2.43	2.43
Resolution		deg.	0.001	0.001	0.001	0.001
Indexing accuracy		sec.	20	20	20	20
Repeatability		sec.	6	6	6	6
Net weight (servo motor excluded)		kg / lb	68 / 150	70 / 154 78 / 172	126 / 278	134 / 295
Allowable loading capacity	Vertical	kg / lb	100 / 220	100 / 220	150 / 331	150 / 331
	Horizontal	kg / lb	200 / 441	200 / 441	300 / 661	300 / 661
	Tailstock applied	kg / lb	200 / 441	200 / 441	300 / 661	300 / 661
FxL When table clamped	F	N / lbs	14000 / 3147	14000 / 3147	20000 / 4496	20000 / 4496
	FXL	N.m / ft. lbs.	1020 / 752	1020 / 752	1700 / 1254	1700 / 1254
	FXL	N.m / ft. lbs.	400 / 295 600 / 443	400 / 295 600 / 443	1270 / 937	1270 / 937
Cam allowable torque		N.m / ft. lbs.	280 / 207	280 / 207	800 / 590	800 / 590
Allowable Max. rotary joint quantity		Port	4	4	6	6

Note: FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

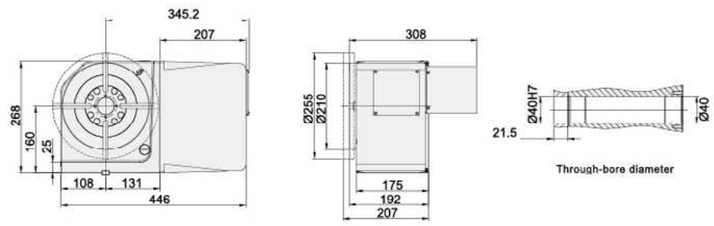
DIMENSIONAL DRAWINGS

Unit : mm

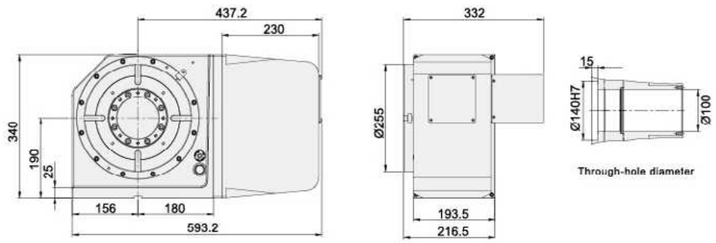
RCX-170RS/H



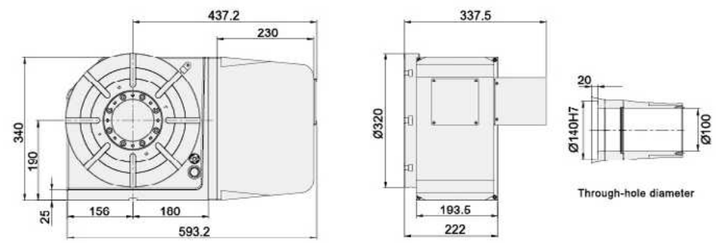
RCX-210S/H / RCX-250ES/H



RCX-255H



RCX-320EH



Compatible Servo Motor

MODEL	RCX-170RS/H	RCX-210S/H	RCX-250ES/H	RCX-255H	RCX-320EH
FANUC	αiF4/βis8	αiF4/βis8	αiF4/βis8	αiF8/βis12	αiF8/βis12
MITSUBISHI	HF/HG-104/154	HF/HG-104/154	HF/HG-104/154	HF/HG-154/224	HF/HG-154/224
SIEMENS	1FK2205-4AF 1FK2206-2AF	1FK2205-4AF 1FK2206-2AF	1FK2205-4AF 1FK2206-2AF	1FK2206-4AF	1FK2206-4AF
HEIDENHAIN	QSY116E	QSY116E	QSY116E	QSY116J	QSY116J

Note: 1. The length of servo guard may vary with servo motor type. (metal sheet dimensions shown above are based on Fanuc motor) Brake system must remain CLAMP status when power failure happens, otherwise, it may cause the dropping of the rotary table under different situations of the facilities and work pieces.

Roller Gear Cam Drive Tilting Rotary Table

RCF-170S/H | RCF-210S/H
RCF-255H | RCF-320EH

R C F - 3 2 0 (E) H

- Roller cam drive
- Five axis
- Table diameter
- Enlarged worktable
- S Super pneumatic brake
- H Hydraulic brake

- Worktable diameter Ø170, Ø210, Ø255, Ø320
- Rolling contact reserves high rigidity, high speed and long endurance.
- Least drive energy wear-out and more than 80% transmission rate.
- Backlash-free from rolling motion achieves high accuracy.

SPECIFICATIONS

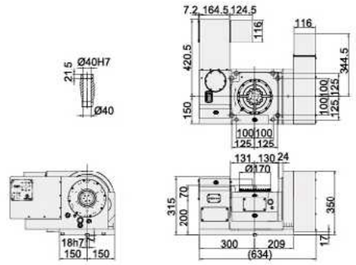
MODEL		Unit	RCF-170S/H		RCF-210S/H		RCF-255H		RCF-320EH	
Worktable diameter		mm / inch	Ø170 / Ø6.69		Ø210 / Ø8.27		Ø255 / Ø10.04		Ø320 / Ø12.60	
Center bore diameter		mm / inch	Ø40H7 / Ø1.57H7		Ø65H7 / Ø2.56H7		Ø140H7x15L/Ø5.51H7x15L		Ø140H7x15L/Ø5.51H7x15L	
Height of table (horizontal)		mm / inch	270 / 10.6		286 / 11.26		335 / 13		340.5 / 13.4	
Height of center (vertical)		mm / inch	200 / 7.87		210 / 8.27		235 / 9.25		235 / 9.25	
Width of T-slot		mm / inch	12H7 / 0.47H7		12H7 / 0.47H7		12H7 / 0.47H7		12H7 / 0.47H7	
Width of guide block		mm / inch	18 / 0.71		18 / 0.71		18 / 0.71		18 / 0.71	
Clamping method /pressure		MPa / psi	P:0.55~0.7/79.8~101.5 H:2.5/363		P:0.55~0.7/79.8~101.5 H:2.5/363		Hydraulic 5 / 725		Hydraulic 5 / 725	
Servo motor spec			refer to page 56							
Transmission ratio			R	T	R	T	R	T	R	T
			1:60	1:90	1:60	1:90	1:60	1:90	1:60	1:90
Max. table speed / at specified servo motor speed		min^{-1}	50 / 3000	33.3 / 3000	50 / 3000	33.3 / 3000	44.4 / 3000	33.3 / 3000	44.4 / 3000	33.3 / 3000
Clamping torque		N.m / ft. lbs.	300 / 221 600 / 443	400 / 295 700 / 516	400 / 295 600 / 443	600 / 443 800 / 590	1270 / 937	1270 / 937	1270 / 937	1270 / 937
Allowable loading capacity	In Horizontal	kg / lb	75 / 165		100 / 220		120 / 265		120 / 265	
	In Tilting (0~90°)	kg / lb	50 / 110		70 / 154		90 / 198		90 / 198	
Allowable unbalancing work moment	WxL	N.m / ft. lbs.	40 / 29.5		62 / 45.7		92 / 67.8		92 / 67.8	
FxL When table clamped	F	N / lbs	7000 / 1571		14000 / 3142		20000 / 4488		20000 / 4488	
	FxL	N.m / ft. lbs.	300 / 221 600 / 443		400 / 295 600 / 443		1270 / 937		1270 / 937	
	FxL	N.m / ft. lbs.	400 / 295 700 / 516		600 / 443 800 / 590		1270 / 937		1270 / 937	
Standard loading inertia ($\frac{W.D^2}{8}$)		$kg.m^2$	0.2		0.4		0.94		0.94	
Resolution		deg.	0.001		0.001		0.001		0.001	
Indexing accuracy		sec	20"	60"	20"	60"	20"	50"	20"	50"
Repeatability		sec	6"	8"	6"	8"	6"	8"	6"	8"
Tilting angle range		deg.	-30 ~ +120		-30 ~ +120		-30 ~ +120		-30 ~ +120	
Net weight (servo motor excluded)		kg / lb	221 / 487		250 / 551		350(3D) / 771(3D)		358(3D) / 789(3D)	
Cam allowable torque		N.m / ft. lbs.	280 / 207		280 / 207		800 / 590		800 / 590	
Allowable Max. rotary joint quantity		Port	4		4		6		6	

Note: 1. R: Rotary Axis T: Tilt Axis
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

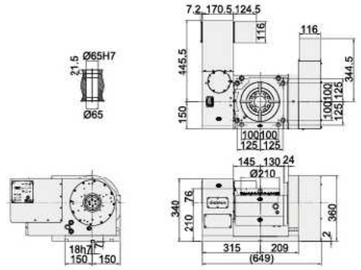
DIMENSIONAL DRAWINGS

Unit : mm

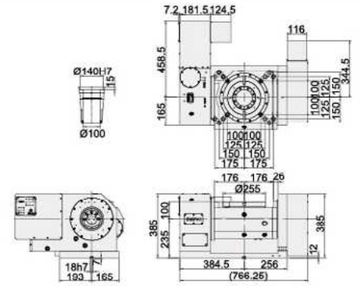
RCF-170S/H



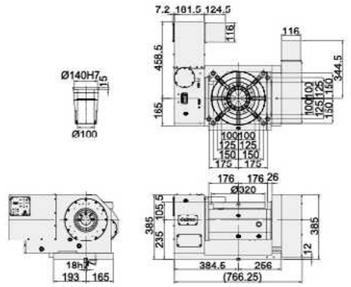
RCF-210S/H



RCF-255H



RCF-320EH



Compatible Servo Motor

MODEL	RCF-170S/H		RCF-210S/H		RCF-255H		RCF-320EH	
Axis	Rotary Axis	Tilting Axis	Rotary Axis	Tilting Axis	Rotary Axis	Tilting Axis	Rotary Axis	Tilting Axis
FANUC	αiF4 β8is	αiF4+β β8is+β	αiF4 β8is	αiF4+β β8is+β	αiF4 β8is	αiF8+β β12is+β	αiF4 β8is	αiF8+β β12is+β
MITSUBISHI	HG-54 HG-104	HG-104+β	HG-104	HG-104+β	HG-104	HG-154+β	HG-104	HG-154+β

Note: 1. The length of servo guard may vary with servo motor type. (metal sheet dimensions shown above are based on Fanuc motor) Brake system must remain CLAMP status when power failure happens, otherwise, it may cause the dropping of the rotary table under different situations of the facilities and work pieces. 2. For Siemens & Heidenhain motor selection, please contact detron for detailed information.

Core Technology — Built- in Torque Motor for Direct Drive

Speed

- Built-in torque motor for direct drive, max speed 250rpm.
- Super low inertia, high efficient gain loop response.
- High acceleration and deceleration, 0- 180 degree positioning in 0.2 sec.

Precision

- Zero backlash, mechanical wear-free and least friction.
- High- end European optical encoder as standard equipment.
- Excellent accuracy guarantee- 20 sec for positioning, 4 sec for repeatability
- ISO 230-2 norm applied as standard inspection.

Rigidity

- Consolidated main body, all mounting interface are integrated onto the cartridge. Premium rigidity retained.

Protection

- IP65 water proof with European adherent electrical connection.
- Thermal detection as standard feature.
- Safe parts holding design during power failure.

Environmental

- Noise- reducing, easy maintenance, free from oil waste.
- Compact structure for flexible working envelope.

Core Technology — High Speed and Precision

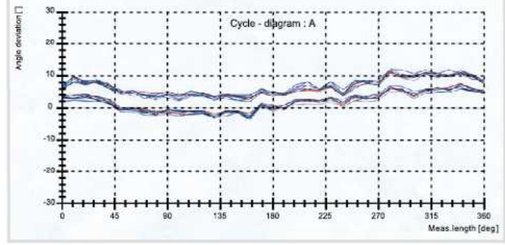
Higher Speed and Torque Performance

Table Ø 170mm model as example

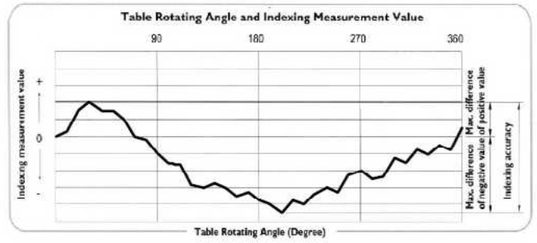
detron		others	
Torque at Peak	201.5 N-m ↑	Torque at Peak	184 N-m ↓
Rated Continuous Torque	60 N-m ↑	Rated Continuous Torque	46 N-m ↓
Continuous Power Output	0.968 KW ↑	Continuous Power Output	0.75 KW ↓
Max Speed	250 ↑	Max Speed	200 ↓

Strict Inspection Norm

detron	others
ISO 230-2 (JIS B6192)	JIS B6330



Accuracy Inspection upon ISO 230-2 international norm is operated with 5 continuous runs in clockwise and counterclockwise test.



Simplified inspection norm without number of laps indicated.

European High End Optical Encoder Applied

detron

Heidenhain or Renishaw are standard attachment for all detron DDM series. High resolution to ± 2.5 secs.

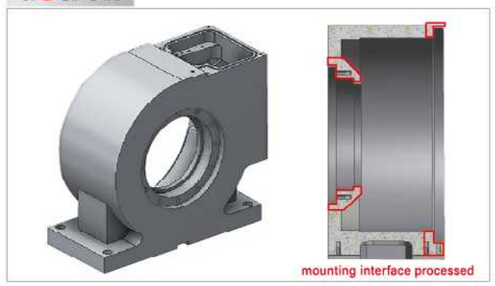
others

Economic encoder of ± 10 secs is applied, non- CNC purpose application.

Core Technology — High Rigidity

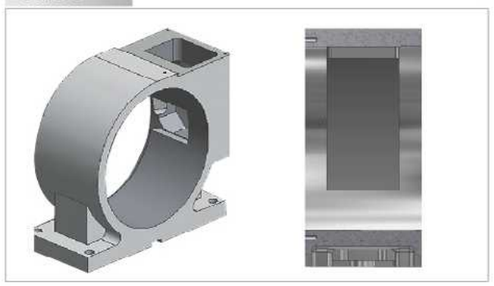
Main Cartridge Structure

detron



- Consolidated main cartridge with spindle mounting interface reserved.
- Least isolated components, accumulated error reduced.
- Excellent rigidity dynamic balance while high speed operation, low inertia and run-out concern.
- Closer distance between optical encoder and bearing for higher positioning detection.

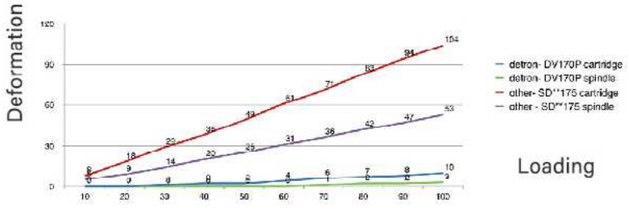
others



- Weak and hollow cartridge without mounting interface reserved. Spindle is installed by isolated flanges.
- Isolated parts caused more accumulated errors.
- Instable rigidity and deformation, mass inertia, low loading capability. Not recommended for high speed processing.
- Longer distance between encoder and bearing, positioning detection is limited.

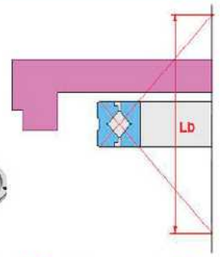
practical test

Rigidity Experiment Analysis



Spindle Bearing

detron

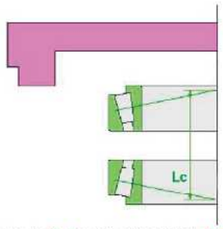


Cross Roller Bearing

moment Lb is longer than Lc, better loading performance.

others

Taper Roller Bearing



moment Lc is shorter than Lb, lower loading capacity.

Cross roller bearing with high capability of axial and radial loading. Better moment to ensure dynamic rigidity.

Low cost taper roller bearing, poor moment and less loading effect.

detron

Guarantee for Thorough Protection

Chip and Water Proof

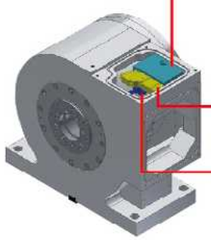
detron

- European adherent connector guarantees safe water proof, signal/ power cable/ pneumatic tube are all integrated in 1 compact pipeline.
- All cables are shielded by anti- erosion pipe and the outer lattice prevents breakage by cutting chips.

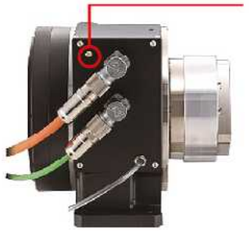
others

- Cables terminated in low cost plug connectors. Isolated electronic and pneumatic pipelines are randomly arranged.
- Poor pipe material. Erosion and chip cut concern on nylon pipes. High risk by frequent break-down.

detron

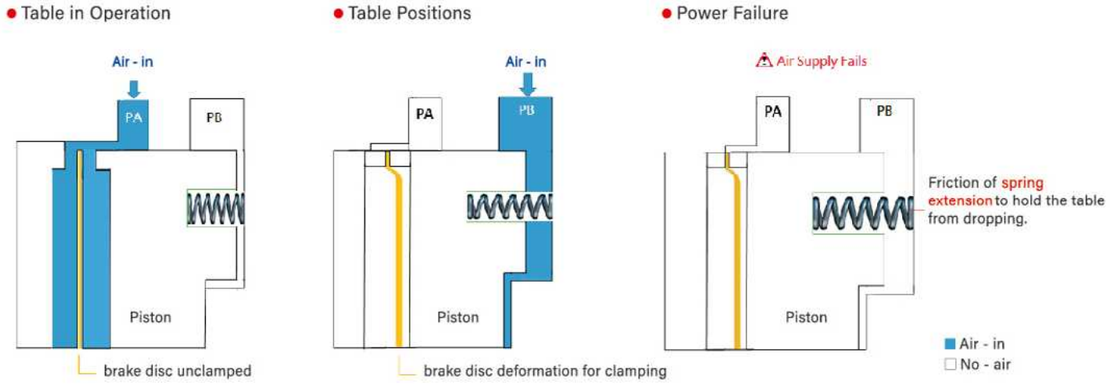


others



Single direction valve exposed in cutting area. Poor function causedby chip accumulation.

Brake in Various Condition



for VMC_DDM series

DDM Rotary Table

DV-170P

- DV: DDM direct drive (torque motor)
- V: Vertical application
- 170: Table size
- P: Pneumatic

equipped with optional table with T-slot

- Rotation speed exceeds 250 min-1, excellent speed and efficiency for mass production.
- Low inertia- no gears or belts drive in direct drive system, resulting in lower inertia and greater acceleration / deceleration.
- Equipped with high precision encoder to achieve high precision positioning.
- Backlash-free transmission improves workpiece accuracy and surface roughness.
- Direct drive features reach zero-wear.

SPECIFICATIONS

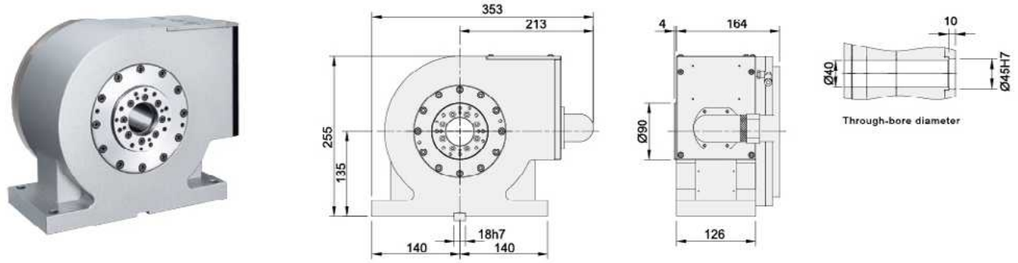
MODEL		Unit	DV-170P	DV-255PII
Worktable diameter		mm / inch	STD : No table OPT : Ø170 / Ø6.69	STD : No table OPT : Ø255 / Ø10.04
Center bore diameter (worktable)		mm / inch	OPT : Ø40H7 / Ø1.57H7	OPT : Ø50H7 / Ø1.96H7
Through-bore diameter		mm / inch	Ø40 / Ø1.57	Ø40 / Ø1.57
Height of center (vertical)		mm / inch	135 / 5.31	160 / 6.3
Width of T-slot		mm / inch	12H7 / 0.47H7	12H7 / 0.47H7
Width of guide block		mm / inch	18 / 0.71	18 / 0.71
Clamping method and pressure		MPa / psi	Pneumatic 0.6 ~ 0.7 / 87 ~ 101.5	Pneumatic 0.5 ~ 0.7 / 72.5 ~ 101.5
Clamping torque		N.m / ft. lbs.	230 / 169.51	400 / 294.8
Transmission Method			Direct Drive	Direct Drive
Max. table speed		min^{-1}	250	250
Allowable loading capacity	Vertical	kg / lb	30 / 66	75 / 165
	Horizontal	kg / lb	-	-
	Rotary Tailstock applied	kg / lb	70 / 154	150 / 330
FxL When table clamped	F	N / lbs	12700 / 2849.88	14000 / 3141.6
	FXL	N.m / ft. lbs.	740 / 540.2	1020 / 751.74
	FXL	N.m / ft. lbs.	230 / 169.51	400 / 294.8
Allowable cutting torque		N.m / ft. lbs.	60 / 44.22	70 / 51.6
Allowable loading inertia	$(\frac{W.D^2}{8})$	$kg.m^2$	0.11	0.61
Resolution		deg.	0.001	0.001
Indexing accuracy		sec.	20	20
Repeatability		sec.	4	4
Net weight (motor incl.)		kg / lb	47 / 104	70 / 154
Cooling system			Air cooling	Air cooling

Remark*:1.Torque motor (Direct Drive motor) can be chosen based on customers' control system.
2.Index accuracy will be different depending on encoder type revised.
3. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

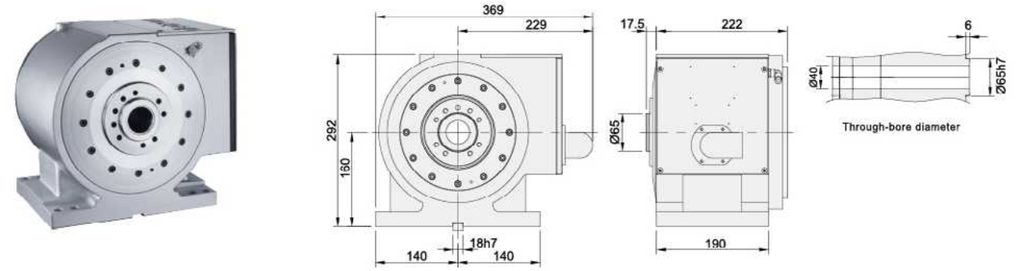
DIMENSIONAL DRAWINGS

Unit : mm

DV-170P



DV-255PII



Application Example

▲ 90° degree dividers

▲ Customized interface of quick change mold , EROWA as example

DDM Trunnion Tilting Rotary Table

D T F S - 1 7 0 P

- S Single support Flat
- E Supplemental Base for standard 3 axis M/C
- P Pneumatic
- H Hydraulic brake
- Table size
- Five axes
- Low Gravity Design
- DDM direct drive (torque motor)

- High Speed – The average rotation speed of a normal rotary table is 22.2 RPM. Whereas DDM Rotary Table runs at speeds exceeding 100RPM. Hence this is suitable for high speed turning and cutting applications.
- High Precision – Direct drive design is without the normal worm gear transmission. Hence, there is no backlash and mechanical errors. This guarantees very high positional accuracy and repeatability.
- Superior Surface Finish - No Backlash, No Abrasion & Low Inertia – No gears or belts in direct drive system ensures superior surface finish.

SPECIFICATIONS

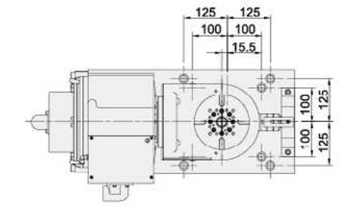
MODEL		Unit	DTFS-125P / DTFE-125P		DTFS-170P DTFE-170P / DTFE-171P	
Worktable diameter		mm / inch	Ø160 / Ø6.29		Ø170 / Ø6.69	
Center bore diameter		mm / inch	Ø30H7 / Ø1.18H7		Ø40H7 / Ø1.57H7	
Height of table (horizontal)		mm / inch	210 / 8 240 / 9		280 / 11 310 / 12	
Height of center (vertical)		mm / inch	210 / 8		280 / 11	
Width of T-slot		mm / inch	12H7 / 0.47H7		12H7 / 0.47H7	
Width of guide block		mm / inch	18 / 0.71		18 / 0.71	
Clamping method / pressure		MPa / psi	pneumatic 0.6~0.7 / 87~101.5		pneumatic 0.6~0.7 / 87~101.5	
Max. table speed		min^{-1}	R	T	R	T
			200	50	250	100
Clamping torque		N.m / ft. lbs.	100 / 73.76	400 / 295.02	230 / 169.64	400 / 295.02
Allowable loadng capacity	In Horizontal	kg / lb	20 / 44.10		30 / 66.14	
	In Tilting (0~90°)	kg / lb	20 / 44.10		30 / 66.14	
Allowable unbalancing work moment	WxL	N.m / ft. lbs.	6.4 / 4.72		30 / 14.74	
FxL When table clamped	F	N / lbs	9700 / 2180.6		12700 / 2855.07	
	FxL	N.m / ft. lbs.	100 / 73.76		230 / 169.64	
	FxL	N.m / ft. lbs.	400 / 295.02		400 / 295.02	
Allowable loading inertia	$(\frac{W.D^2}{8})$	$kg.m^2$	0.05		0.12	
Resolution		deg.	0.001		0.001	
Indexing accuracy		sec	20	30	20	30
Repeatability		sec	4	4	4	4
Tilting angle range		deg.	+30 ~ -120		+30 ~ -120	
Net weight (motor incl.)		kg / lb	DTFS-125P: 105 / 231.49 DTFE-125P: 226 / 498.24		DTFS-170P: 215 / 474 DTFE-170P: 296 / 652.56 DTFE-171P: 336 / 740.75	
Cooling system			Air cooling		DTFE-171P: Oil cooling DTFE-170P / DTFS-170P: Air cooling	

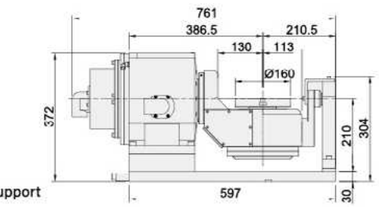
Remark* : 1. Oil cooling device shall be connected and shared from the basic 3 axis standard machine.
2. Air cooling device is not allowed for continuous cutting.
3. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

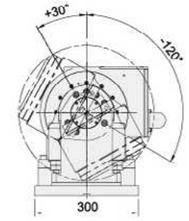
DIMENSIONAL DRAWINGS

Unit : mm

DTFE-125P with base plate

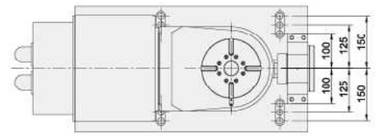


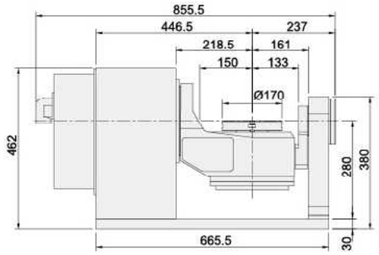


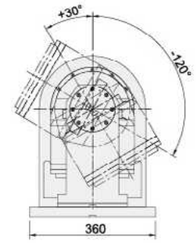


▲ **DTFS-125P** with compact single support

DTFE-170P with base plate

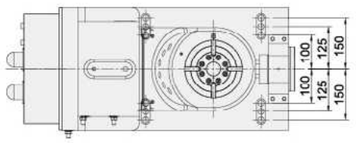


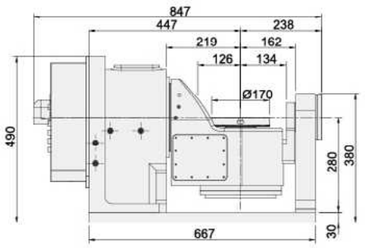


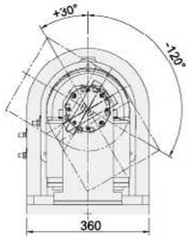


▲ **DTFS-170P** with compact single support is recommended model for multiple faces positioning application

DTFE-171P







DDM Trunnion Tilting Rotary Table

DTFA(I)-650(E)H

- refer to Remark-2
- new optimization model
- Five axes
- Low Gravity Design
- DDM direct drive (torque motor)
- Table size
- Enlarged worktable dia. (Opt.)
- Hydraulic brake

▲ Machine base supplied by buyer

- High Speed – The average rotation speed of a normal rotary table is 22.2 RPM. Whereas DDM Rotary Table runs at speeds exceeding 100RPM. Hence this is suitable for high speed turning and cutting applications.
- High Precision – Direct drive design is without the normal worm gear transmission. Hence, there is no backlash and mechanical errors. This guarantees very high positional accuracy and repeatability.
- Superior Surface Finish - No Backlash, No Abrasion & Low Inertia – No gears or belts in direct drive system ensures superior surface finish.

SPECIFICATIONS

MODEL		Unit	DTF-280P		DTFAI-650H / DTFAI-720EH	
Worktable diameter		mm / inch	Ø280 / Ø11.02		Ø650 / Ø25.59 / Ø720 / Ø28.34	
Center bore diameter		mm / inch	-		Ø70H7 / Ø2.76H7	
Height of table		mm / inch	200 / 7.87		250 / 9.84	
Width of T-slot		mm / inch	12H7 / 0.47H7		18H7 / 0.71H7	
Width of guide block		mm / inch	-		-	
Clamping method / pressure		MPa / psi	R: pneumatic 0.6~0.7 / 87~101.5	T: pneumatic 0.4 / 58.0	hydraulic 4 / 580	
Max. table speed		min^{-1}	R: 1500	T: 150	R: 100	T: 50
Clamping torque		N.m / ft. lbs.	250 / 184.39	550 / 405.66	2500 / 1843.91	4500 / 3319.03
Allowable loading capacity	In Horizontal	kg / lb	60 / 132.28		300 / 661.39	
	In Tilting (0~90˚)	kg / lb	60 / 132.28		300 / 661.39	
Allowable unbalancing work moment	WxL	N.m / ft. lbs.	60 / 44.25		300 / 221.27	
FxL When table clamped	F	N / lbs	18000 / 4046.56		40000 / 8992.36	
	FxL	N.m / ft. lbs.	250 / 184.39		2500 / 1843.91	
	FxL	N.m / ft. lbs.	550 / 405.66		4500 / 3319.03	
Allowable loading inertia	$(\frac{W.D^2}{8})$	$kg.m^2$	0.22		9.4	
Resolution		deg.	0.001		0.001	
Indexing accuracy		sec	20	30	10	20
Repeatability		sec	4	4	4	4
Tilting angle range		deg.	+30~-120		+110 ~ -110	
Net weight (motor incl.)		kg / lb	432 / 952.39		1450 / 3196.7 / 1500 / 3306.9	
Cooling system			Oil cooling		Oil cooling	

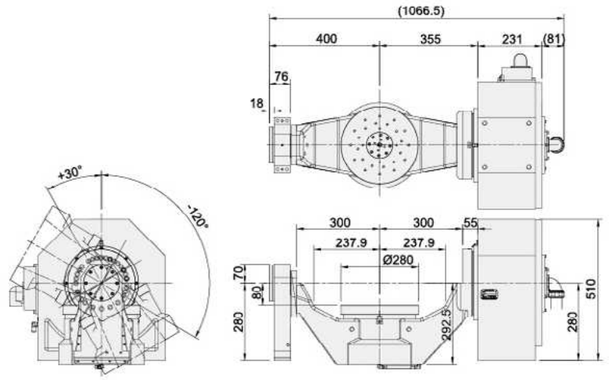
Remark*: 1. Oil cooling device shall be connected and shared from the basic 3 axis standard machine.
2. DTFA: Rotary table mounted on M/C base. DTFAI: Tilting axis mounted inside of MC column.
3. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

DIMENSIONAL DRAWINGS

Unit : mm

DTF-280P

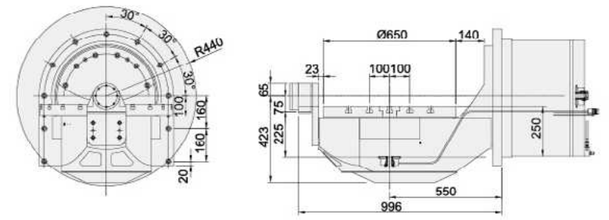
Machine base supplied by buyer



DTFAI-650H

▲ DTFAI-720EH

Machine base supplied by buyer



Hybrid Drive ▶▶▶

DTF-410H

Rotary Axis – DDM (100rpm)

Tilting Axis – DDM (60rpm)

G2DTF-630H(S)

Dual Drive CNC Deep Tilting Rotary Table
(Max. table size 800mm)

Rotary Axis - DDM (80rpm, option 800rpm)

Tilting Axis - Tandem drive by spur gear and worm gear

NC Integration for Detron DDM series

DDM Rotary Table

Compatible System & Spec.		DV-170P	DV-255PII
Cooling System		Air Cooling	Air Cooling
Optical Scale		Renishaw or Heideihain	
NC parameter		Exclusive tech of detron	
Fanuc System	Driver	α iSV20: New: A06B-6240-H123 Old : A06B-6117-H103 β iSV20: New: A06B-6160-H002 Old : A06B-6130-H002	α iSV80: New: A06B-6240-H125 Old : A06B-6117-H105 β iSV80: New: A06B-6160-H004 Old : A06B-6130-H004
	Remark	Purchase software "Pole Position Detection Function" from NC service center: 0i-MC: A02B-0310-S744 0i-MD: A02B-0320-S744 0i-MF: A02B-0340-S744 31i-B5: A02B-0326-S744	
Mitsubishi System	Driver	New: MDS-EJ-V1-30 Old : MDS-DJ-V1-30	New: MDS-EJ-V1-40 Old : MDS-DJ-V1-40
	Remark	N/A	
Siemens System	Driver	With Internal Cooling: 6SL3120-1TE15-0AA4 Compact Type: 6SL3420-1TE15-0AA1	With Internal Cooling: 6SL3120-1TE21-0AA4 Compact Type: 6SL3420-1TE21-0AA1
	Remark	- Purchase Siemens "SMC40" module while applying Heidenhain encoder. - Purchase Renishaw "A-977-0575" signal transferrer while applying Renishaw encoder.	
Heidenhain System	Driver	UM111D	UM111D
	Remark	- Compatible with Heideihain Optical Scale Only	

DDM Trunnion Tilting Rotary Table

Compatible System & Spec.		ø125mm	
		DTFS125P / DTFE125P	
Axis		Tilting Axis	Rotary Axis
Cooling System		Air Cooling	Air Cooling
Optical Scale		Renishaw or Heideihain	
NC parameter		Exclusive tech of detron	
Fanuc System	Driver	α iSV80: New: A06B-6240-H125 Old : A06B-6117-H105 β iSV80: New: A06B-6160-H004 Old : A06B-6130-H004	α iSV40: New: A06B-6240-H124 Old : A06B-6117-H104 β iSV40: New: A06B-6160-H003 Old : A06B-6130-H003
	Remark	Purchase software "Pole Position Detection Function" from NC service center: 0i-MC: A02B-0310-S744 0i-MD: A02B-0320-S744 0i-MF: A02B-0340-S744 31i-B5: A02B-0326-S744	
Mitsubishi System	Driver	New: MDS-EJ-V1-40 Old : MDS-DJ-V1-40	New: MDS-EJ-V1-40 Old : MDS-DJ-V1-40
	Remark	N/A	
Siemens System	Driver	With Internal Cooling: 6SL3120-1TE21-0AD0 Compact Type: 6SL3420-1TE21-0AA1	With Internal Cooling: 6SL3120-1TE21-0AD0 Compact Type: 6SL3420-1TE21-0AA1
	Remark	- Purchase Siemens "SMC40" module while applying Heidenhain encoder. - Purchase Renishaw "A-977-0575" signal transferrer while applying Renishaw encoder.	
Heidenhain System	Driver	UM111D	UM111D
	Remark	- Compatible with Heideihain Optical Scale Only	

DDM Trunnion Tilting Rotary Table

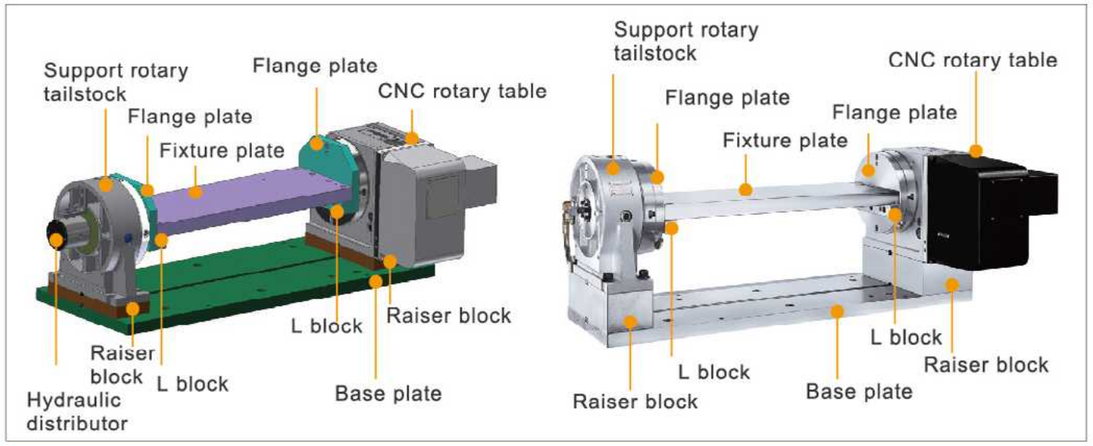
Compatible System & Spec.		ø170mm			
		DTFS170P / DTFE170P		DTFE171P	
Axis		Tilting Axis	Rotary Axis	Tilting Axis	Rotary Axis
Cooling System		Air Cooling	Air Cooling	Oil Cooling	Oil Cooling
Optical Scale		Renishaw or Heideihain			
NC parameter		Exclusive tech of detron			
Fanuc System	Driver	α iSV40: New: A06B-6240-H124 Old : A06B-6117-H104 β iSV40: New: A06B-6160-H003 Old : A06B-6130-H003	α iSV20: New: A06B-6240-H123 Old : A06B-6117-H103 β iSV20: New: A06B-6160-H002 Old : A06B-6130-H002	α iSV80: New: A06B-6240-H125 Old : A06B-6117-H105 β iSV80: New: A06B-6160-H004 Old : A06B-6130-H004	α iSV40: New: A06B-6240-H124 Old : A06B-6117-H104 β iSV40: New: A06B-6160-H003 Old : A06B-6130-H003
	Remark	Purchase software "Pole Position Detection Function" from NC service center: 0i-MC: A02B-0310-S744 0i-MD: A02B-0320-S744 0i-MF: A02B-0340-S744 31i-B5: A02B-0326-S744			
Mitsubishi System	Driver	New: MDS-EJ-V1-80 Old : MDS-DJ-V1-80	New: MDS-EJ-V1-30 Old : MDS-DJ-V1-30	New: MDS-EJ-V1-80 Old: MDS-DJ-V1-80	New: MDS-EJ-V1-40 Old : MDS-DJ-V1-40
	Remark	N/A			
Siemens System	Driver	With Internal Cooling: 6SL3120-1TE21-8AD0	With Internal Cooling: 6SL3120-1TE15-0AD4	With Internal Cooling: 6SL3120-1TE23-0AD0	With Internal Cooling: 6SL3120-1TE21-0AD0
	Remark	- Purchase Siemens "SMC40" module while applying Heidenhain encoder. - Purchase Renishaw "A-977-0575" signal transferrer while applying Renishaw encoder.			
Heidenhain System	Driver	UM112D	UM111D	UM112D	UM111BD
	Remark	- Compatible with Heideihain Optical Scale Only			

DDM Trunnion Tilting Rotary Table

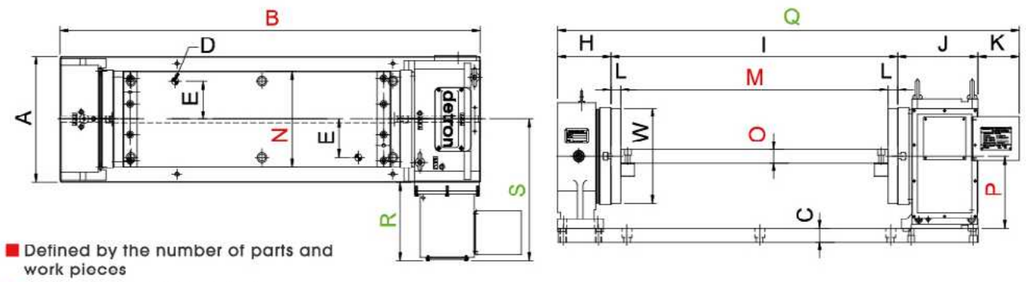
Compatible System & Spec.		ø280 mm & ø650 mm			
		DTF-280P		DTFAI-650H	
Axis		Tilting Axis	Rotary Axis	Tilting Axis	Rotary Axis
Cooling System		Oil Cooling	Oil Cooling	Oil Cooling	Oil Cooling
Optical Scale		Renishaw or Heideihain			
NC parameter		Exclusive tech of detron			
Fanuc System	Driver	Please See Note*	Please See Note*	α iSV360S-B: A06B-6240-H169	α iSV160S-B: A06B-6240-H126
	Remark	Purchase software "Pole Position Detection Function" from NC service center: 0i-MC: A02B-0310-S744 0i-MD: A02B-0320-S744 0i-MF: A02B-0340-S744 31i-B5: A02B-0326-S744			
Mitsubishi System		Contact us for further information of integration with Mitsubhishi system.			
Siemens System	Driver	With Internal Cooling: 6SL3120-1TE24-5AC0	With Internal Cooling: 6SL3120-1TE23-0AD0	With Internal Cooling: 6SL3120-1TE26-0AC0	With Internal Cooling: 6SL3120-1TE23-0AD0
	Remark	- Purchase Siemens "SMC40" module while applying Heidenhain encoder. - Purchase Renishaw "A-977-0575" signal transferrer while applying Renishaw encoder.			
Heidenhain System	Driver	UM113D	UM112D	UM114D	UM113D
	Remark	- Compatible with Heideihain Optical Scale Only			

Note* : For detailed information, please contact detron.

Fixture Plate and Base



Suggested Dimension of Fixture and Base Plate



■ Defined by the number of parts and work pieces
■ Attention to machine interference

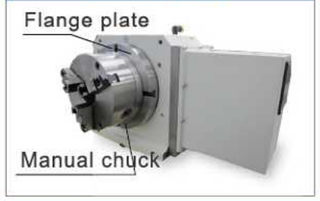
unit: mm / inch

MODEL	Unit	GXA-125S	GXA-170S	GXA-210S	GXA-255H	GXA-320H	GXA-400H	DV-170P	DV-255PII
X axis stock	mm / inch	500 / 20	600 / 24	700 / 28	800 / 32	1000 / 40	1300 / 51	500/20	700/28
A	mm/inch	210 / 8.27	270 / 10.63	270 / 10.63	330 / 12.99	360 / 14.17	450 / 17.72	290 / 11.42	290 / 11.41
B	mm/inch	726 / 28.58	856 / 33.7	956 / 37.64	1101 / 43.35	1241 / 48.86	1440 / 56.69	635 / 25	849 / 33.42
C	mm/inch	30 / 1.18	35 / 1.38	35 / 1.38	35 / 1.38	40 / 1.57	40 / 1.57	35 / 1.38	35 / 1.38
D	mm/inch	2-Ø14 / 2-Ø0.55	2-Ø18 / 2-Ø0.71	2-Ø18 / 2-Ø0.71	2-Ø18 / 2-Ø0.71	2-Ø18 / 2-Ø0.71	2-Ø18 / 2-Ø0.71	2-Ø18 / 2-Ø0.71	2-Ø18 / 2-Ø0.71
E	mm/inch	80 / 3.15	100 / 3.94	100 / 3.94	100 / 3.94	100 / 3.94	125 / 4.92	100 / 3.94	125 / 4.92
H	mm/inch	130 / 5.12	130 / 5.12	130 / 5.12	140 / 5.51	145 / 5.71	190 / 7.48	100 / 3.94	100 / 3.94
I	mm/inch	441 / 17.36	551 / 21.69	651 / 25.63	751 / 29.57	861 / 33.90	961 / 37.83	401 / 15.79	551 / 21.7
J	mm/inch	155 / 6.10	175 / 6.9	175 / 6.9	210 / 8.27	235 / 9.25	254 / 10	168 / 6.61	230 / 9.05
K	mm/inch	89 / 3.5	111.5 / 4.4	118.5 / 4.66	115 / 4.52	116.5 / 4.58	117.5 / 4.63	-	-
L	mm/inch	20 / 0.79	25 / 0.98	25 / 0.98	25 / 0.98	30 / 1.18	30 / 1.18	25 / 0.98	25 / 0.98
M	mm/inch	400 / 15.75	500 / 19.69	600 / 23.62	700 / 27.56	800 / 31.50	900 / 35.43	350 / 13.78	500 / 19.69
N	mm/inch	120 / 4.72	170 / 6.69	200 / 7.87	250 / 9.84	300 / 11.81	400 / 15.75	170 / 6.69	200 / 7.87
O	mm/inch	30 / 1.18	30 / 1.18	30 / 1.18	40 / 1.57	40 / 1.57	40 / 1.57	30 / 1.18	30 / 1.18
P	mm/inch	110 / 4.33	135 / 5.31	160 / 6.30	190 / 7.48	210 / 8.27	255 / 10.04	135 / 5.31	160 / 6.30
Q	mm/inch	815 / 32.08	967.5 / 38.1	1072.5 / 42.2	1216 / 47.87	1357.5 / 53.4	1523 / 60	669 / 26.33	881 / 34.68
R	mm/inch	206 / 8.11	190 / 7.48	194 / 7.63	200 / 7.87	236 / 9.29	246 / 9.68	68 / 2.67	84 / 3.30
S	mm/inch	311 / 12.24	325 / 12.8	329 / 12.95	365 / 14.37	416 / 16.37	471 / 18.54	213 / 8.38	229 / 9.01
W	mm/inch	107 / 4.21	126 / 4.96	141 / 5.55	180.5 / 7.10	206.5 / 8.12	230 / 9.05	126 / 4.96	141 / 5.55

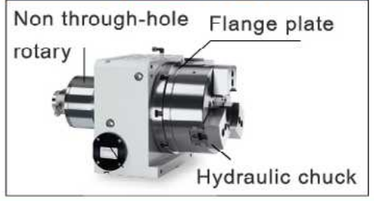
Remark 1: The center height of permissible error between rotary table and support rotary tailstock is within
Remark 2: Contact detron technical division for proper software adjustment under mass factors of fixture. ±0.01 mm

Chuck and Other Accessories

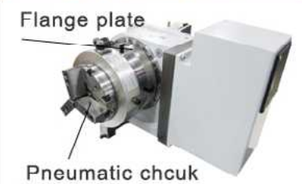
Manual chuck



Hydraulic chuck



Pneumatic chuck



ROTARY TABLE AND COMPATIBLE CHUCK

MODEL	GXA-125S	GXA-170S	GXA-210S	GXA-255H	GXA-320H	GXA-400H	GX-500H
Manual chuck	SC-4″, SC-5″	SK-6″, SK-7″	SK-7″, SK-8″	SK-8″, SK-9″	SK-10″, SK-12″	SK-10″, SK-12″	SK-12″, SK-16″
Hydraulic chuck		HCK-6″	HCK-6″	HCK-8″	HCK-10″		

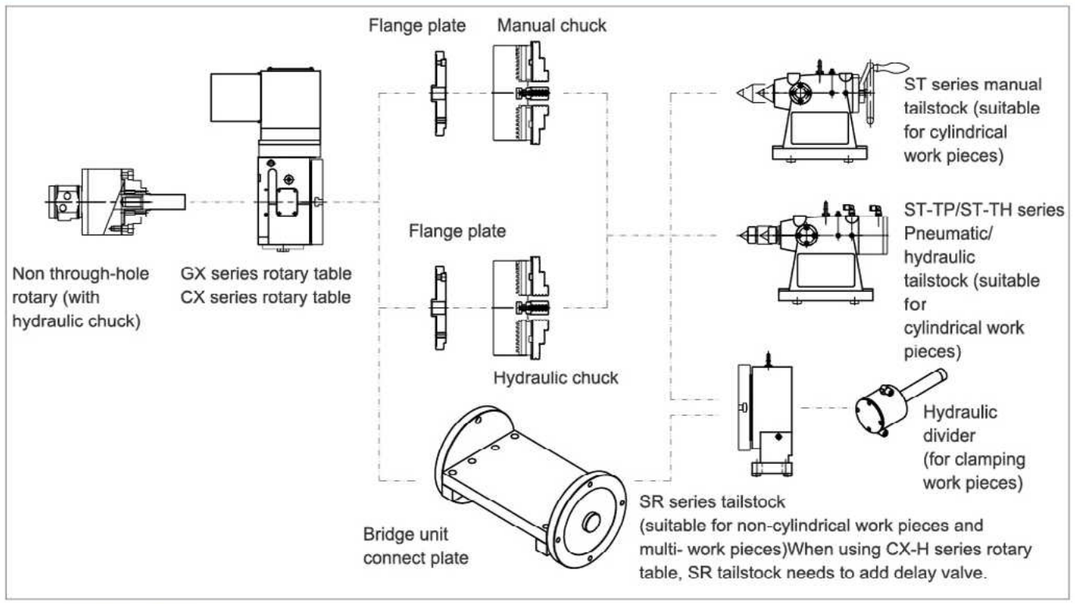
*Model in red is suggested

GRIPPING RANGE OF 3- JAW CHUCK

unit: mm / inch

MODEL	SC-4	SC-5	SK-6	SK-7	SK-8	SK-9	SK-10	SK-12	SK-16
O.D. range	Ø 3 - 90 / Ø 0.12 - 3.5	Ø3-110/ Ø0.12-4.33	Ø3-160/ Ø0.12-6.30	Ø8-180/ Ø0.31-7.09	Ø8-190/ Ø0.31-7.48	Ø11-220/ Ø0.43-8.66	Ø12-260/ Ø0.47-10.24	Ø15-300/ Ø0.59-11.81	Ø30-400/ Ø1.18-15.75
I.D range	Ø32-84/ Ø1.26-3.31	Ø35-100/ Ø1.38-3.94	Ø55-150/ Ø2.17-5.91	Ø62-170/ Ø2.44-6.69	Ø68-180/ Ø2.67-7.08	Ø70-210/ Ø2.76-8.27	Ø80-250/ Ø3.15-9.84	Ø90-290/ Ø3.54-11.42	Ø110-380/ Ø4.33-14.96

ACCESSORIES CONNECTION DIAGRAM



Hydraulic power unit (HTK series)

Applied for GXA-H & CX-H, series rotary tables.
Recommended for application with hydraulic chuck or hydraulic fixture.

ABR-50 air booster unit

Use for GXA-H series
Recommended for application in NC table only or with SR-H hydraulic tailstock. Additional hydraulic unit is suggested for peripheral hydraulic part- holding device.

Compatible Servo Motors

4th Axis

Model	CNC and Servo System						
Model	FANUC	MITSUBISHI	YASKAWA	SIEMENS	HEIDENHAIN	FAGOR	Brother (SANGYO)
GXA-125S	αiF2 βis4	HG-75	SGM7J08A	1FK2204-6AF 1FK2205-2AF	QSY-96A	FKM22.30A	-
GXA-170S GXA-170S-2W	αiF4 βis8	HG-104	SGM7G09A	1FK2205-4AF 1FK2206-2AF	QSY-116C	FKM42.30A	R2AA08075FXPHV R2AAB8100HXP5F RS2W03A0KL10XXXXC00
GXA-210S	αiF4 βIs8	HG-104	SGM7G09A	1FK2205-4AF 1FK2206-2AF	QSY-116C	FKM42.30A	R2AA08075FXPHV R2AAB8100HXP5F RS2W03A0KL10XXXXC00
GXA-250S	αiF4 βis8	HG-104	SGM7G09A	1FK2205-4AF 1FK2206-2AF	QSY116C	FKM42.30A	-
GXA-255H CX-255H	αiF8 βis8	HG-154	SGM7G13A	1FK2206-4AF	QSY-116E	FKM44.30A	-
GXA-320H CX-320H	αiF12 βis22	HG-204	SGM7G30A	1FK2208-3AC	QSY-155B	FKM64.30A	-
GXA-400H CX-400H	αiF12 βis22	HG-204	SGM7G30A	1FK2208-3AC	QSY-155B	FKM64.30A	-
GXA-500H CX-500H	αiF12 βis22	HG-204	SGM7G30A	1FK2208-3AC	QSY-155B	FKM64.30A	-
GX-630H GXA-630EH	αiF22 βis22	HG-354	SGM7G44A	1FK2208-4AC	QSY-155D	FKM66.30A	-
GX-800H	αiF22 βis22	HG-354	SGM7G44A	1FK2208-4AC	QSY-155D	FKM66.30A	-

5th Axis

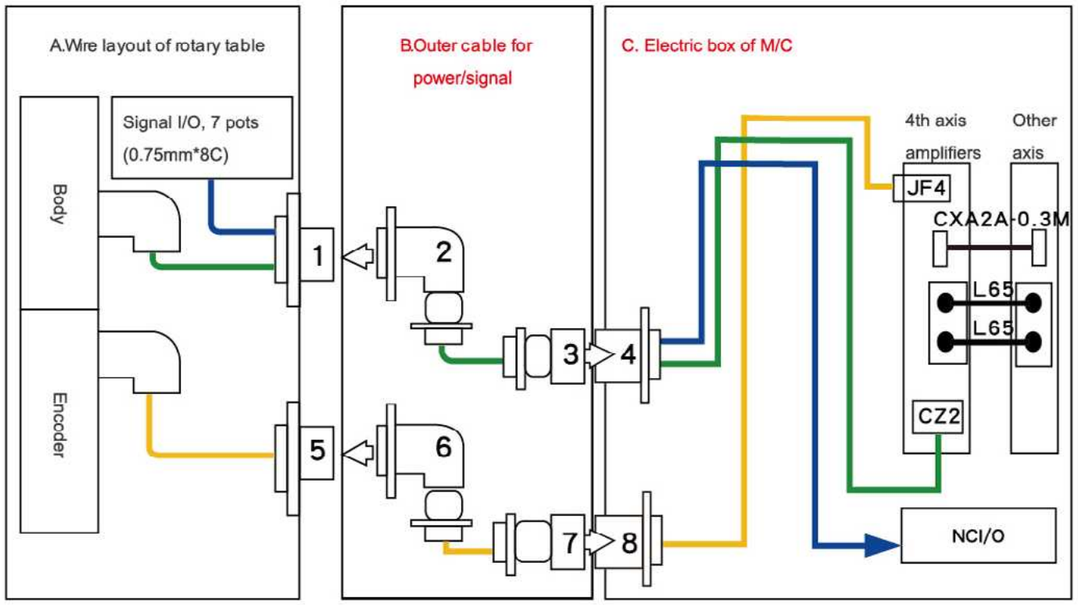
Model	Motor & NC system											
	FANUC		MITSUBISHI		YASKAWA		SIEMENS		HEIDENHAIN		FAGOR	
Axis	Rotary Axis	Tilting Axis	Rotary Axis	Tilting Axis	Rotary Axis	Tilting Axis	Rotary Axis	Tilting Axis	Rotary Axis	Tilting Axis	Rotary Axis	Tilting Axis
GFA-101S	αiF2 / βis4	αiF2 / βis4	HG-105	HG-105	SGMJV08A SGM7J08A	SGMJV08A SGM7J08A	1FK2204-6AF 1FK2205-2AF	1FK2204-6AF 1FK2205-2AF	QSY-96A	QSY-96G	FKM22.30A	FKM22.30A
GFA-125S GFA-125S-2W-240	αiF2 / βis4	αiF4 / βis8	HG-75	HG-104	SGMJV08A SGM7J08A	SGMGV09A SGM7G09A	1FK2204-6AF 1FK2205-2AF	1FK2205-4AF 1FK2206-2AF	QSY-96A	QSY-116C	FKM22.30A	FKM42.30A
GFA-170S	αiF4 / βis8	αiF4 / βis8	HG-104	HG-104	SGMGV09A SGM7G09A	SGMGV09A SGM7G09A	1FK2205-4AF 1FK2206-2AF	1FK2206-4AF	QSY-116C	QSY-116C	FKM22.30A	FKM42.30A
GFA-210S	αiF4 / βis8	αiF8 / βis12	HG-104	HG-104	SGMGV09A SGM7G09A	SGMGV09A SGM7G09A	1FK2205-4AF 1FK2206-2AF	1FK2206-4AF	QSY-116C	QSY-116C	FKM42.30A	FKM42.30A
GTFAE-210-2W-320 GFA-255H GFA-170S-2W-300	αiF4 / βis8	αiF8 / βis12	HG-104	HG-154	SGMGV09A SGM7G09A	SGMGV13A SGM7G13A	1FK2205-4AF 1FK2206-2AF	1FK2206-4AF	QSY-116C	QSY-116E	FKM42.30A	FKM42.30A
GFA-320H	αiF8 / βis12	αiF12 / βis22	HG-154	HG-204	SGMGV13A SGM7G13A	SGMGV30A SGM7G30A	1FK2206-4AF	1FK2208-3AC	QSY116E	QSY155B	FKM42.30A	FKM44.30A
GTFAE-170SL	αiF2 / βis4	αiF4 / βis8	HG96S	HG-H104S	SGMJV08A	SGMJV13A	-	-	-	-	-	-
GTFAE-320H	αiF4 / βis8	αiF12 / βis22	HG-104	HG-204	SGMGV13A SGM7G13A	SGMGV30A SGM7G30A	1FK2205-4AF 1FK2206-2AF	1FK2208-3AC	QSY116E	QSY155B	FKM42.30A	FKM44.30A
GTFA(E)-210S GTFA(E)-255SBL(S)	αiF4 / βis8	αiF8 / βis12	HG-104	HG-224	SGMGV09A SGM7G09A	SGMGV13A SGM7G13A	1FK2205-4AF 1FK2206-2AF	1FK2206-4AF	QSY116C	QSY116J	FKM42.30A	FKM42.30A
GTFA-320X	αiF4 / βis8	αiF8 / βis12	HG-104	HG-224	SGMGV09A SGM7G09A	SGMGV13A SGM7G13A	1FK2205-4AF 1FK2206-2AF	1FK2206-4AF	QSY116E	QSY116J	FKM42.30A	FKM42.30A
GTFA(E)-320XB/ XBL(S)	αiF4 / βis8	αiF12 / βis22	HG-104	HG-204	SGMGV13A SGM7G13A	SGMGV30A SGM7G30A	1FK2206-4AF	1FK2208-3AC	QSY116E	QSY155B	FKM42.30A	FKM64.30A
GTFA(E)-410XB/ XBL(S)/HL(S) GTFAE-255H-2W-400	αiF8 / βis12	αiF12 / βis22	HG-154	HG-204 HG-354	SGMGV13A SGM7G13A	SGMGV30A SGM7G30A	1FK2206-4AF	1FK2208-3AC	QSY116J	QSY155C	FKM44.30A	FKM64.30A
GTFA(E)-500XB GTFA(E)-500XBL	αiF8 / βis12	αiF22	HG-154	HG-354	SGMGV13A SGM7G13A	SGMGV30A SGM7G30A	1FK2206-4AF	1FK2208-4AC	QSY-116J QSY-130E	QSY155F	FKM44.30A	FKM66.30A

* Please refer to the basic X/Y/Z axial motor to identify compatible 4/5th motor specification.

Diagram Illustration

Diagram sample to connect Japan NC

Standard military connector
(Japanese CNC system)
Military connector is used for FANUC and Mitsubishi controls.



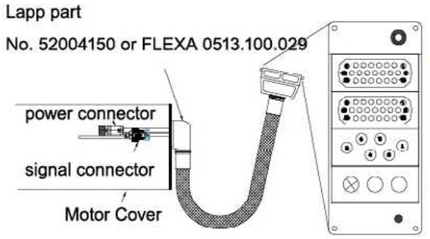
Cable spec. for JP NC

Power connector # connector SPEC	1 MS3102A28-11P	2 MS3108A28-11S	3 MS3106A28-11P	4 MS3102A28-11S
Signal connector # connector SPEC FANUC / 17Pin	5 MS3102A20-29PW	6 MS3108A20-29SW	7 MS3106A20-29PW	8 MS3102A20-29SW
MITSUBISHI / 17Pin	MS3102A20-29P	MS3108A20-29S	MS3106A20-29P	MS3102A20-29S
MITSUBISHI / 19Pin	MS3102A22-14P	MS3108A22-14S	MS3106A22-14P	MS3102A22-14S

Diagram sample to connect EU NC

Adherent-type connector (European CNC system or with optical encoder)
One outlet-type connector is used for Siemens and Heidenhain controls.

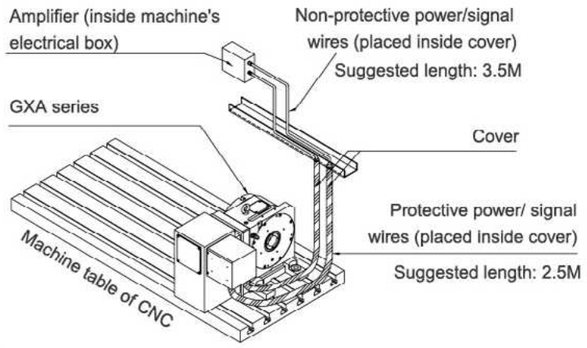
Lapp part
No. 52004150 or FLEXA 0513.100.029



		Connector Module (female)	
a	25P	Signal / Encoder	1 . 5 - 1 EU modular ; 2 . 9M
b	25P	Motor encoder	SIEMENS/HEIDENHAIN signal with EU plug ; 2.9M
c	6P	4-axis power	SIEMENS/HEIDENHAIN power with EU plug ; 2.9M
d	3P	4X6mm air tube for D1	2 . 9M

Guidance to Select Rotary Table

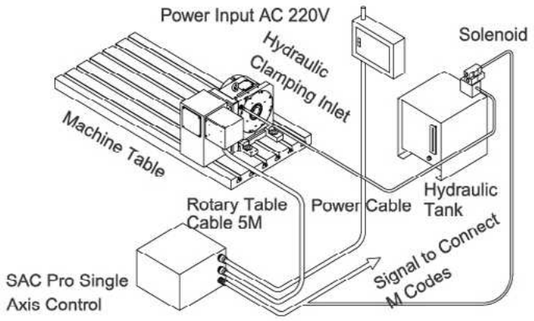
SCHEMATIC DIAGRAM OF ROTARY TABLE AND CNC MACHINE



Feature

- Allows for simultaneous control with X, Y, Z-axis of machine and ARC machining.
- Programs can be directly edited on the control screen of the machine.
- Suggested length 2.5M with protective pipe for outer power / signal cable, from motor cover to machine guarding. (for X travel 500-1300mm machines)
- for power / signal cable, from machine guarding for power / signal cable, from machine guarding to amplifier.

SCHEMATIC DIAGRAM OF ROTARY TABLE AND SINGLE AXIS CONTROLLER



Hydraulic Solenoid Valve Wire
(SAC Pro is directly connected to rotary table of pneumatic models)

SAC Pro Series- Single Axis Control

Features:

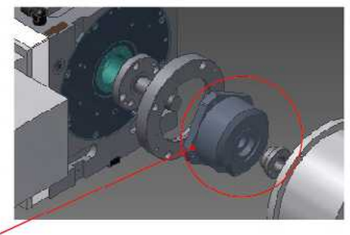
- For machine NC without 4th axis function, SAC Pro provide signals to allow indexing application (no simultaneous function available).
- Programs of rotary table can be directly input through SAC Pro and allow machine NC M code command.
- Compatible with any brand of NC control.

OPTIONAL OPTICAL SCALE

	±5"	FANUC	MITSUBISHI	SIEMENS	±5"	
Heidenhain Model	RCN2390 F	●			H2AF-26-D90	Fagor Model
	RCN2390 M		●		H2AM-26-D90	
	RCN2380			●	H2AS-23-D90	
	RCN2310					

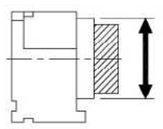
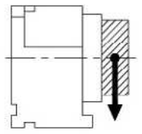
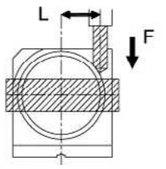
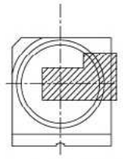
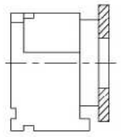
	±10"	FANUC	MITSUBISHI	SIEMENS	±10"	
Heidenhain Model	ECN2190 F	●			H2AF-23-D87	Fagor Model
	ECN2190 M		●		H2AM-23-D87	
	ECN2180			●	H2AS-23-D87	

*Recommended option for titling axis of 5 axis.



Heidenhain encoder

SELECT A PROPER ROTARY TABLE ACCORDING TO WORKPIECE AND CUTTING CONDITIONS

Workpiece diameter	Workpiece weight	Indexing processing	Eccentric Load	For workpiece with large diameter but light weight
				
Within rotary table diameter	Within allowable load range	FXL value should be within the range of clamping torque	• Movement of inertia of workpiece should be within the permissible ange • Consider interference	• Movement of inertia of workpiece should be within the permissible range • Consider interference

Interference Reminders

Please refer to right illustration:

X axis (Fig 1)

- A. Pay attention to total length of rotary table+tailstock+fixture+base plate, machine table envelope, rest space between splashguard and X axial limit.

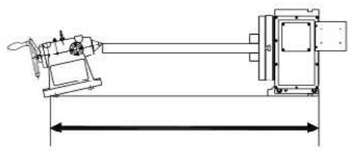


Fig 1

Y axis (Fig 2)

- B. Locate table center paralleled to Y axis center. Pay attention to the clearance of rotary table cover to front splashguard.
- C1 & C2 as the rest space between Y+ / Y- limit.

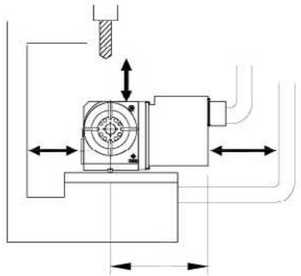


Fig 2

Z axis (Fig 2 and Fig 3)

- D. as maximum distance between tooling and NC table body (refer to item E-1).
- E. Distance between spindle nose to working table.
- F. Stroke for tool change.
- G. Allowable maximum tool length.
- H. Swing of tool change.

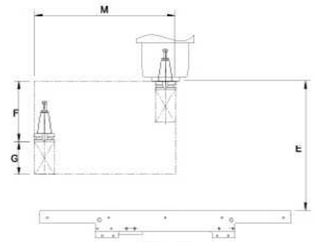


Fig 3

Appendix

Order Sheet of 4/5th axis

STEP 1 _ Machine Info			
Q1	Machine Information	Machine Brand _____ Machine Model _____	
Q2	Control System	□ Fanuc □ Mitsubishi □ Siemens □ Heidenhain □ Others_____	
Q3	Working Table Info	Size: L_____*W_____ T-slot size: □ 14mm □ 16mm □ 18mm □ 22mm T-slot Pitch: □ 80mm □ 100mm □ 125mm □ 150mm □ Others_____ Number of T-slot: □ 3 □ 4 □ 5 □ 6	Catalog P76_Fig. 4
STEP 2 _ NC Table Selection			
Q4	Rotary Table	□ 4th Axis Rotary Table, Model No._____, Q'ty _____ □ 5th Axis Tilting Rotary Table, Model No._____, Q'ty _____	
Q5	Connector Cover Location	4th Axis cable connector located at □ rear (vertical application) □ side (horizontal application)	Catalog P76_Fig. 5
		5th Axis cable connector located at □ rear (AC axis application) □ front (BC axis application)	Catalog P76_Fig. 6
	Connector Interface	□ Interface of MS connector, □ Interface of PG29 connector □ Inner cable prepared by buyer, motor cover attached with connector plate without holes	
	Inner and Outer Cable Type	□ Section A (Inside the motor cover), 0.5M, standard attachment for Fanuc and Mitsubishi System □ Section A+B □ separated type □ integrated type Section A: 0.5M, Section B: _____M □ Section A+B+C □ separated type □ integrated type Section A: 0.5M, Section B: _____M, Section C: _____M Connector Type □ 17 pin □ 19 pin (only selected for Mitsubishi system) Remark: Inner cable for tilting axis: 1.2M, inner cable for rotary axis (4th axis): 0.5M	Catalog P76_Fig. 7 Remark: detron standard cable length: 2.5M for section B & 3.5M for section C
Q6	Tailstock	□ Rotary tailstock, model SR-_____ □ Quill tailstock, model ST-_____, □ standard quill taper MT3 □ optional quill taper MT4 □ Manual Switch Valve required for pneumatic or hydraulic quill tailstock (optional)	
Q7	M/C Control System & Servo Motor	□ Fanuc system □ alpha □ beta; □ 4th axis_____□ 5th axis_____□ straight shaft □ taper shaft □ Mitsubishi system □ 4th axis_____□ 5th axis_____□ straight shaft □ taper shaft □ Siemens system □ 4th axis_____□ 5th axis_____ □ Heidenhain system □ 4th axis_____□ 5th axis_____ □ Other system_____□ 4th axis_____□ 5th axis_____ Motor supplied by □ buyer or □ detron □ special request_____ Amplifier supplied by □ buyer or □ detron, model_____□ Amplifier wirings required Independent Controller□ Single Axis □ Dual Axis	
Q8	Limit switch (5th axis only)	□ Standard tilting axis limit setting as catalogue diagram, □ Others_____ □ Standard 2 wires NC, □ Others_____	
Q9	Solenoid	□ DC24V, □ AC110V, □ AC220V	
STEP 3 _ Peripheral Accessories			
Q10	Optical scale	□ Heidenhain □ Renishaw □ Fagor □± 5"□± 10" □± 13" □ Optical scale cable required, □ 10M □ 12M as a recommended option for tilting axis upon 5th axis application	
Q11	Chuck	□ 3-Jaw Manual scroll chuck, SC-_____, □ 3-Jaw Powerful chuck, SK-_____ □ Pneumatic chuck, _____;□ Hydraulic chuck, _____;□ Others_____ □ Chuck interface flanged required only. (Chuck equipped by buyer)	Catalog P70
Q12	Air / Hydraulic System accesorries	□ Air booster (air-oil conventer) ABR-35, for hydraulic table (+tailstock) only □ Hydraulic Unit, please describe the detailed application below: _____ □ Pneumatic Connector & Tube Kit, _____M□ Hydraulic Connector & Tube Kit _____M	Catalog P70
Q13	Rotary Joint	□ 4 port □ 6 port □ 8 port □ 10 port □ ___port , please refer to spec sheet for suitable port q'ty. □ ___ port with air tube, ___ port with hydarulic tube Tube Size □ 1/4" □ 1/8", tube size will be determined by the center bore size (please refer to the final layout)	
Q14	Others	□ Please describe the detailed application below: _____	

M/C table

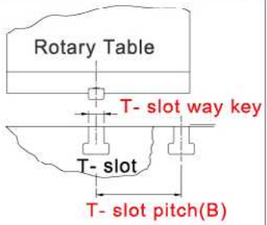


Fig 4

Connector Location

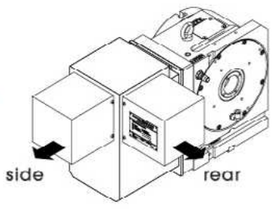


Fig 5

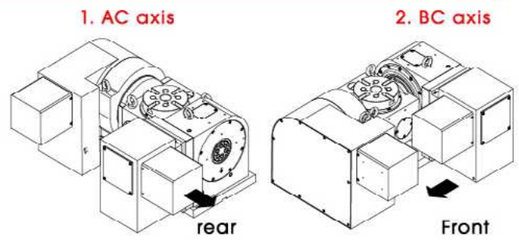
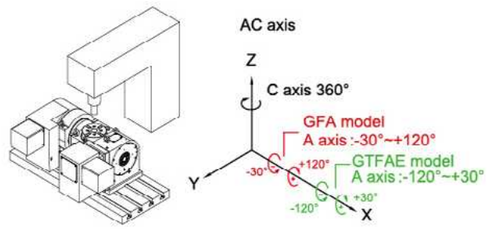


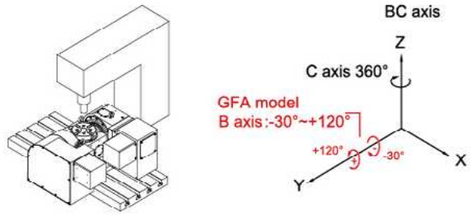
Fig 6

Illustration of Tilting Angle Range

1. AC axis application



2. BC axis application



Sections of Cables

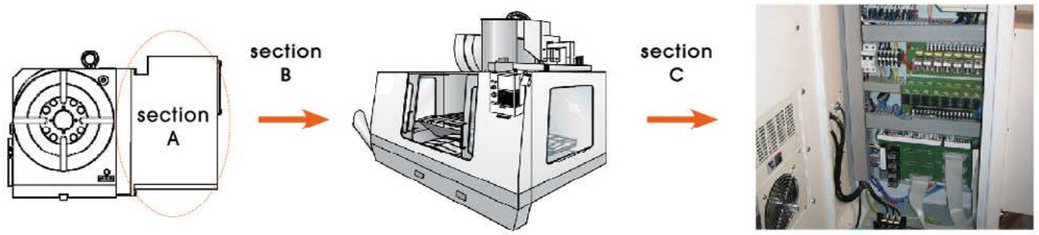


Fig 7

	Regular Connection of Japan NC System	Regular Connection of European NC System	
Section A Power+Signal Wire of NC Table	Individual Wires	Integrated Cable	Integrated Cable
Section B Power+Signal Cables between NC Table to MC Guard	Individual Cables		
Section C Power+Signal Connection in M/C Electrical Cabinet	Individual Connection	Individual Connection	

Order Sheet of DDM Rotary Table

STEP 1_ Machine Info			
Machine Spec	Machine information	Machine brand _____ Machine model _____	
	Control System	☐FANUC ☐MITSUBISHI ☐SIEMENS ☐HEIDENHAIN ☐Others_____	
	Original 3 axis Driver Information	☐model_____	
Working Table Info	Table size	L_____*W_____ (Please provide relating drawing)	
	T-slot width (A)	☐14mm ☐16mm ☐18mm ☐22mm ☐Others_____	Catalog P78_Fig.1
	T-slot pitch (B)	☐100mm ☐125mm ☐150mm ☐Others_____	Catalog P78_Fig.2
	Number of T-slot	☐3 ☐4 ☐5 ☐6 ☐Others_____	
STEP 2_Rotary Table Spec			
DDM Rotary Table	detron Model	☐DV-170P ☐DV-255PII ☐DTFS-125P ☐DTFE-125P ☐DTFS-170P ☐DTFE-170P ☐DTFE-171P ☐DTF-280P ☐DTFA-650H ☐DTFAI-650H	
	Solenoid for Pneumatic model	☐AC110V ☐AC220V ☐DC24V	
	Limit switch (5 axis only)	☐standard tilting axis limit setting (refer to each model ' s specification list on catalogue) ☐Others_____	
		☐2 wires NC(detron standard) ☐Others_____	
Parameter		Exclusive Tech of detron	
Operation Manual		☐English ☐Japanese	
STEP 3_for 4th axis DDM Model choose only			
NC Control	Torque motor	☐detron ☐Others, Model _____	
	Driver	Supplied by ☐buyer ☐detron	
		FANUC system ☐α i system, Model _____ ☐β i system, Model _____ Mitsubishi system ☐MDS-EJ-_____ ☐MDS-DJ-_____ Siemens ☐6SL3120-1TE_____ ☐6SL3420-1TE_____ Heidenhain ☐UM111D Remark: Purchase software "Pole Position Detection Function" from NC service center: 0i-MC: A02B-0310-S744 0i-MD: A02B-0320-S744 0i-MF: A02B-0340-S744 31i-B5: A02B-0326-S744	Catalog P67
Peripheral Accessories	Faceplate	☐Without(detron standard) ☐incl. faceplate ☐Others _____	
	Tailstock	☐ Rotary tailstock, model SR-_____ ☐ Quill tailstock, model ST- _____, quill taper MT3 ☐optional quill taper MT4 ☐ live center ☐ Manual Switch Valve required for pneumatic or hydraulic quill tailstock (optional)	
	Chuck	☐3-Jaw Powerful chuck, SK- _____ ☐Pneumatic chuck, _____ ; ☐Hydraulic chuck, _____ ; ☐Others _____ ☐Only flange plate (Chuck supplied by buyer), Chuck brand _____, Model _____(Please provide relating drawing)	Catalog P70
	Fixture plate and Accessories	☐Required (Please discuss more details with detron)	Catalog P69
STEP 4_for 5th axis DDM model choose only			
NC Control for rotary axis	Torque	☐detron ☐Others, Model _____	
	Driver	Supplied by ☐buyer ☐detron	
		FANUC system ☐α i system, Model _____ ☐β i system, Model _____ Mitsubishi system ☐MDS-EJ-_____ ☐MDS-DJ-_____ Siemens ☐6SL3120-1TE _____ Heidenhain ☐UM Remark: Purchase software "Pole Position Detection Function" from NC service center: 0i-MC: A02B-0310-S744 0i-MD: A02B-0320-S744 0i-MF: A02B-0340-S744 31i-B5: A02B-0326-S744	Catalog P67 & P68
NC Control for tilting axis	Torque	☐detron ☐Others, Model _____	
	Driver	Supplied by ☐buyer ☐detron	
		FANUC system ☐α i system, Model _____ ☐β i system, Model _____ Mitsubishi system ☐MDS-EJ-_____ ☐MDS-DJ-_____ Siemens ☐6SL3120-1TE_____ Heidenhain ☐UM_____ Remark: Purchase software "Pole Position Detection Function" from NC service center: 0i-MC: A02B-0310-S744 0i-MD: A02B-0320-S744 0i-MF: A02B-0340-S744 31i-B5: A02B-0326-S744	Catalog P67 & P68
STEP 5_Accessories required info			
Accessories	Optical scale	detron standard-Renishaw optical scale ☐R+F (suitable for Fanuc control) ☐R+M (suitable for Mitsubishi control) ☐R+S (suitable for Siemens control) ☐R+B (suitable for PC-based control)	
		optional Heidenhain optical scale ☐H+F (suitable for Fanuc control) ☐H+M (suitable for Mitsubishi control) ☐H+S (suitable for Siemens/Heidenhain control)	
	Sensor Module (while applying Siemens control)	☐Heidenhain optical scale shall be equipped with Siemens "SMC40" module, supplied by buyer ☐Renishaw optical scale shall be equipped with Renishawa "A-977-0575" module, supplied by detron	
	Temperature Control	☐Supplied by detron TM-K2(3pcs for each axis) ☐Supplied by buyer	
	Cable set	Supplied by ☐buyer ☐detron (If supplied by detron, please choose below items) ☐ Standard: Integrated cable with adherent connector. Inner Section: 2.5M, Outer Section: 4.0M ☐ Special length required: Integrated cable with adherent connector. Inner Section: _____M, Outer Section: _____M Inner Section: from table to M/C guarding Outer Section: detrom M/C guarding to amplifier	Catalog P78_Fig.3
	Rotary Joint	☐Pneumatic _____ port ☐Hydraulic _____ port	
		☐Pressure required _____ Mpa	
STEP 6_Others			
Others		☐Please describe the detailed application below: _____	

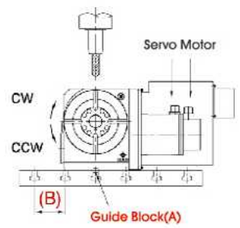


Fig.1

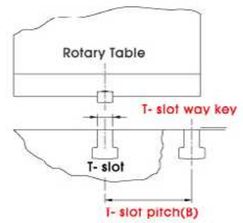


Fig.2

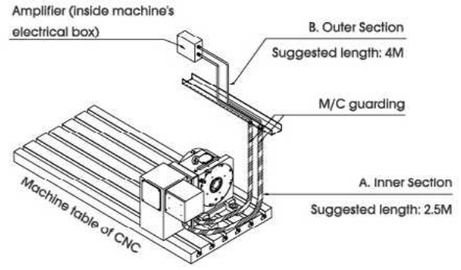


Fig.3