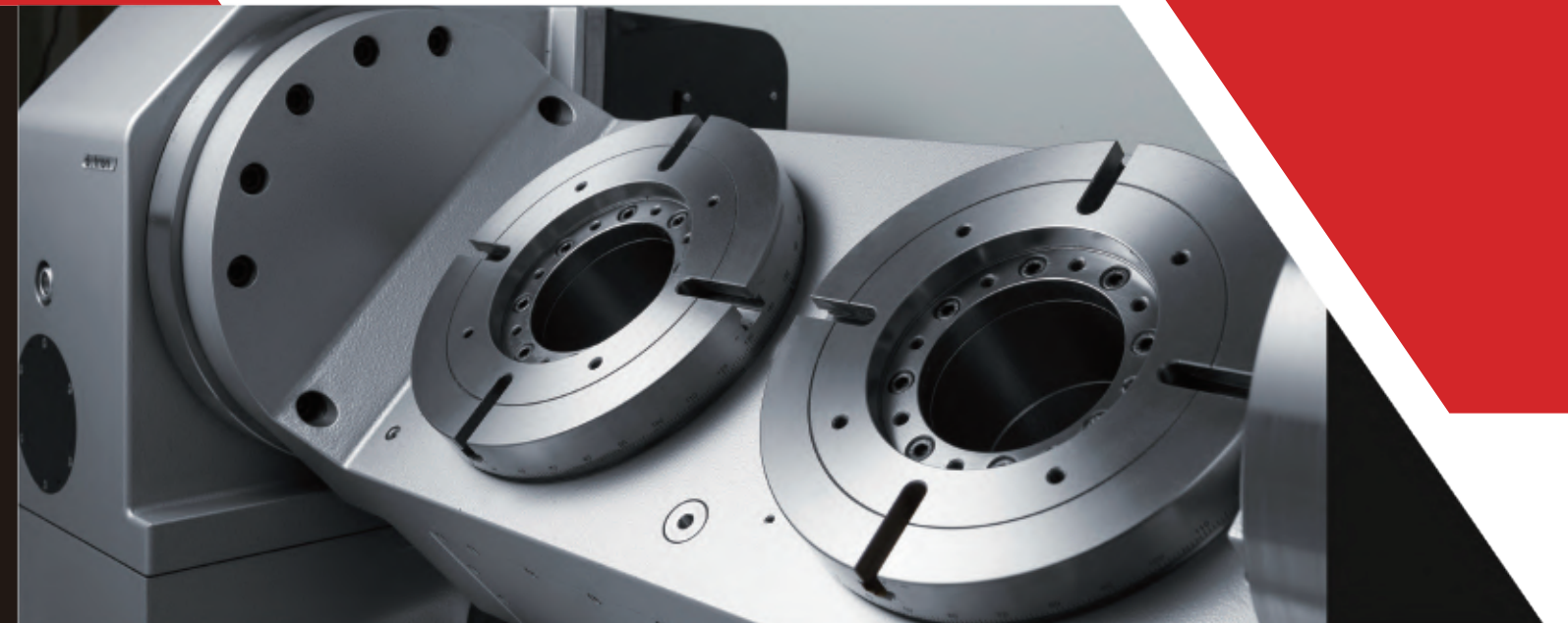


PRODUCT LINE UP

Quality and Cost Effect



detron Machine Co., Ltd.

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<http://www.detron-rotary.com>
e-mail: export.sales@detron.com.tw



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_APR_2025,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 customization

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



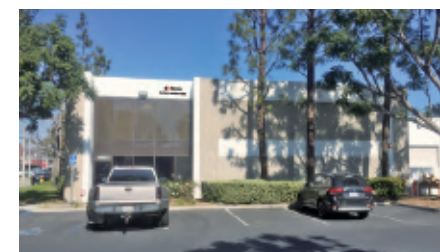
- After-sales service and parts inventory
- distributor training center

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

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for VMC_Worm Wheel Transmission

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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
Page 23

GXA-2W series

multi spindle,
pneumatic power clamp



GXA-170S-2W-250
Page 23

GXA-H/GX-H series

hydraulic clamp,
ultra large bore through



GXA-255H
GXA-320H
GXA-400H
GXA-500H
GX-630H
GX-800H
Page 25-28

GXA-L series

motor at left



GXA-170SL
GXA-210SL
GXA-255HL
Page 29

5th axis

GFA-S/H/HB series

compact 5th axis



GFA-101S
GFA-125S
GFA-170SII/HII
GFA-200ESII/HII
GFA-210S/H
GFA-255H/HB
GFA-320H
Page 37-40

GFA-2W series

5th axis in multi spindle



GFA-125S-2W-240
GFA-170S-2W-300
Page 47

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

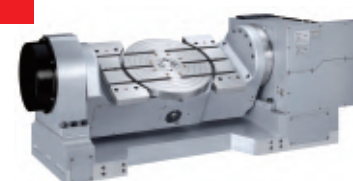
trunnion 5th axis



GTFAE-125S
GTFAE-210S
GTFAE-320XB/H
GTFAE-410XB
GTFAE-500XB
Page 41-43

GTFAE series

trunnion 5th axis
with enlarged swing



GTFAE-170SL
GTFAE-255SBL(S)
GTFAE-320XBL(S)
GTFAE-400XBL(S)/HL(S)
GTFAE-500XBL
Page 45

GTFA(I)-(E)HB (Suitable for BC axis application)

trunnion 5th axis



GTFA-650EHB
GTFAI-650EHB
GTFAI-720EHB
Page 43

RCX / RCF

RCX-S/H series

roller gear cam 4th axis



RCX-210S/H
RCX-250ES/H
RCX-255H
RCX-300H
RCX-400H
Page 55

RCF-S/H series

roller gear cam 5th axis



RCF-170S/H
RCF-210S/H
RCF-255H
RCF-320H
Page 57

DDM

DV series

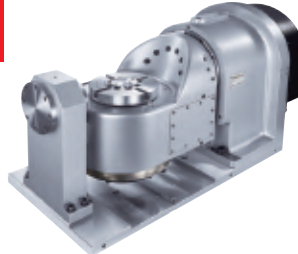
high speed 4th axis by DDM built-in



DV-170P
DV-255PII
Page 63

DTF series

high speed 5th axis by DDM built-in



DTFS-125P
DTFE-125P
DTFS-170P
DTFE-170P
DTFE-171P
DTFAI-650H
DTFAI-720EH
D2TF-800H
Page 65-68

Others

GVA-B series

4th axis with motor at back



GV-170SB
GVA-210SB
GVA-255HBII
Page 31

CX-H series

hydraulic indexing table by hirth coupling



CX-255H
CX-320H
CX-400H
CX-500H
Page 33

Tailstock

ST-T/TP/TH series

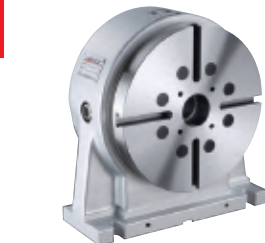
quill type tailstock



ST-125T/TP
ST-170T/TP
ST-210T/TP
ST-255T/TH
ST-320T/TH
ST-400T/TH
Page 35

SR-P/H series

rotary type tailstock



SR-125P
SR-170P
SR-210P
SR-255H
SR-320H
SR-400H
SR-500H
Page 36

Customized Product with DDM

Pallet changeable



With sub support



Page 68

Low gravity and dual drive at tilting axis



Page 68

Built in machine table



for VERTICAL

Machining Center Series

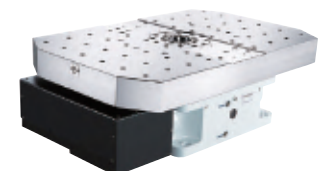
Auto Pallet Change

For VMC with fixed column



CVR-660
CVR-850
CVR-10D
Page 51

For VMC with movable column



SVC-7050II
SVC-10065II
Page 52



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 identify 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.

Practical Clamping Force Approved



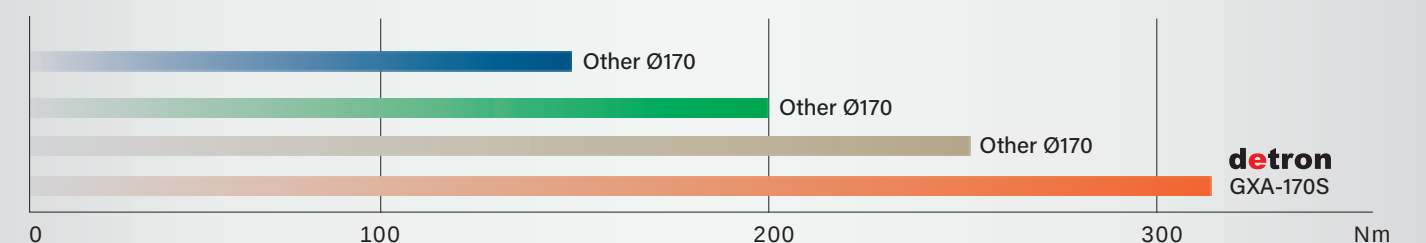
Clamping torque can reach to 35kg.m
鎖緊扭矩可達35kg.m



$T = F \times r$
 $T = 100kg \times 0.36m = 36kg.m$



Super multiple pneumatic brake
強力型氣壓機械



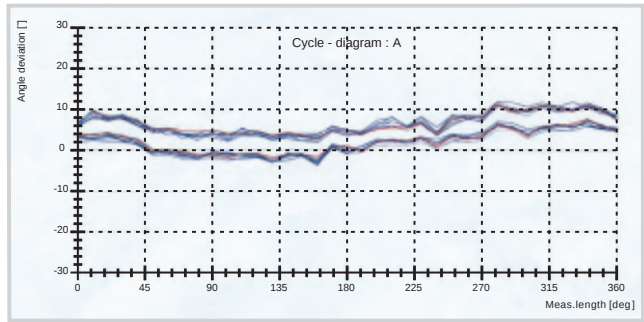
GXA-170S remains stable & high accuracy performance with repeated clamping test. This clamp test is part of the standard testing procedure of every detron product.

Scan these QR codes to see video:



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.

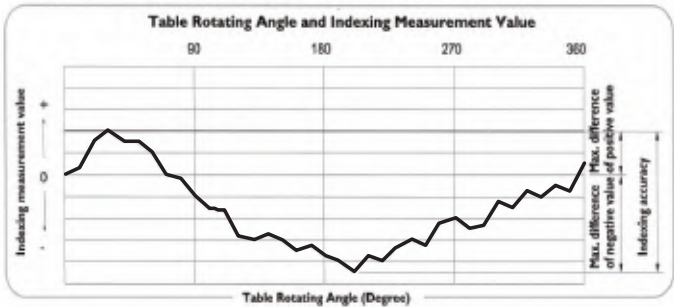
Facility of Inspection

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

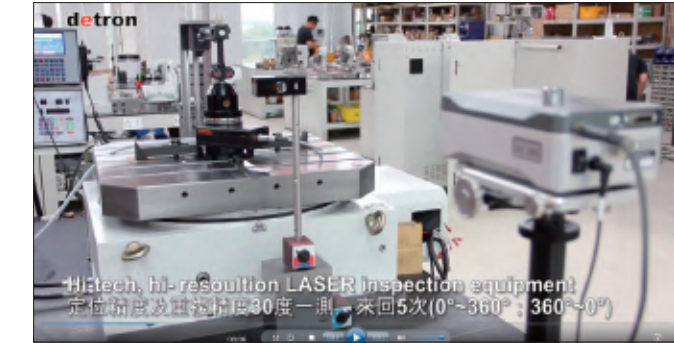


others

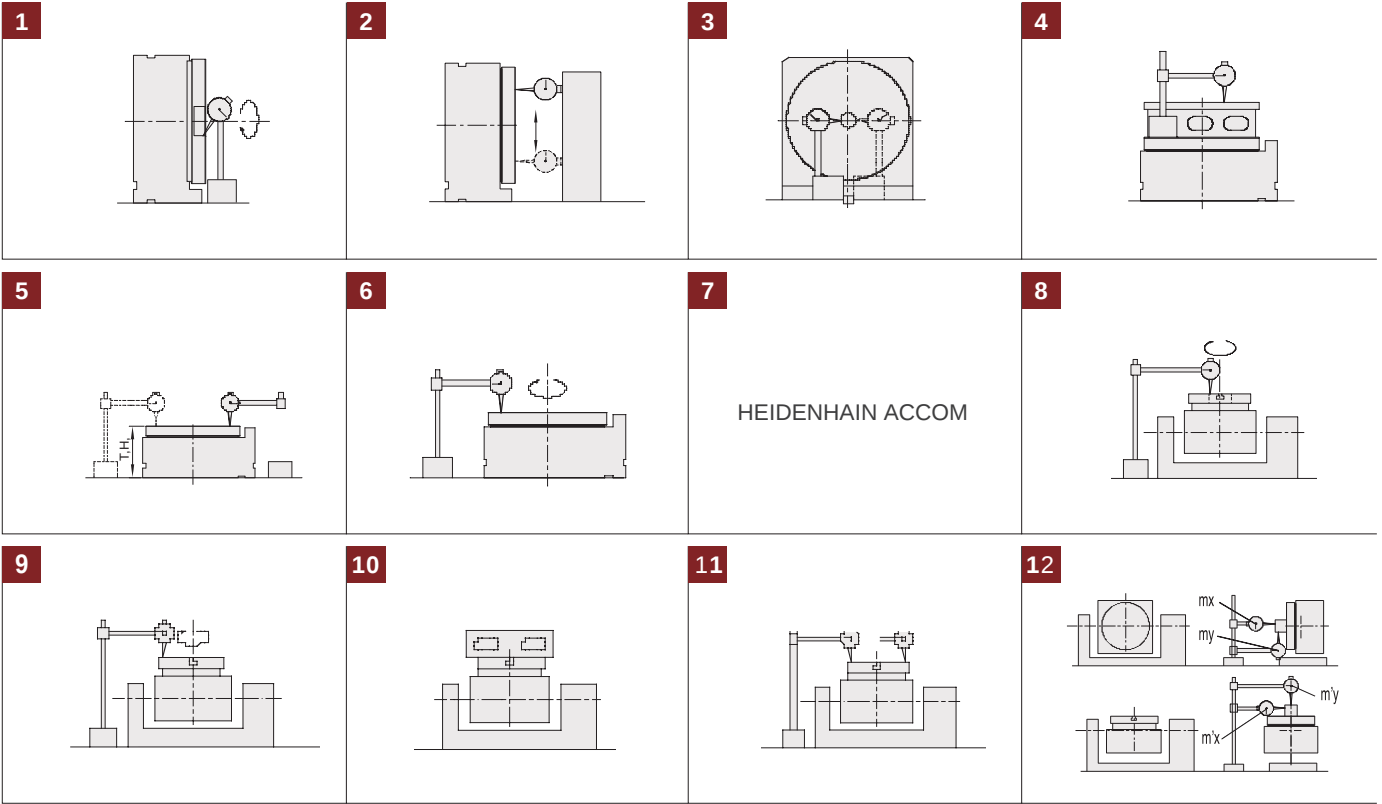
JIS B 6330 Norm in Single cycle



Simplified inspection norm without number of laps indicated.



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	0.02	0.02	0.02
	Deviation between center hole and center of guide block	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.	Repeatability 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 Surface and base		0.01	(Ø400-500: 0.015)
11.	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	

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.

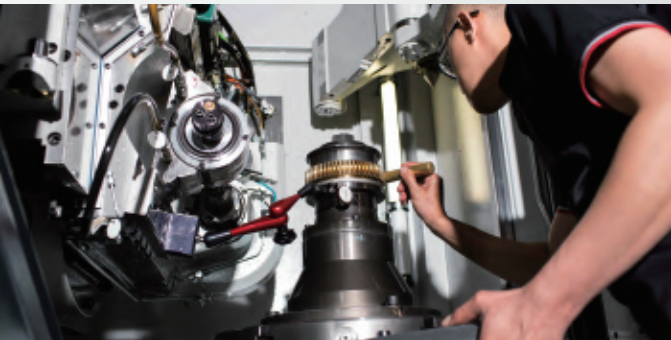
Please note: Due to environmental influences during the measurement, the recorded measuring error may exceed the catalog limit value by up to 10%.

Core Components — Facilities and Precise Process

German Lieberr Hobbing Machines

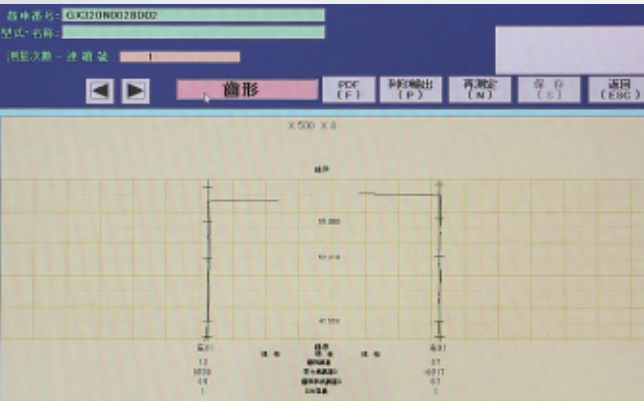


Vertical Hobbing Machine



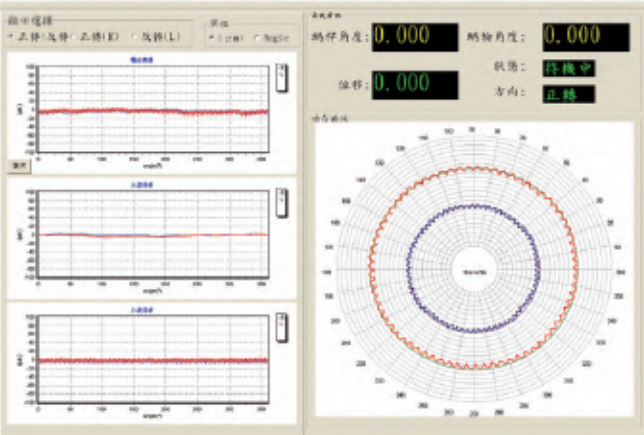
Gear Measuring Machine

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.



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

Automation for Burr Removing

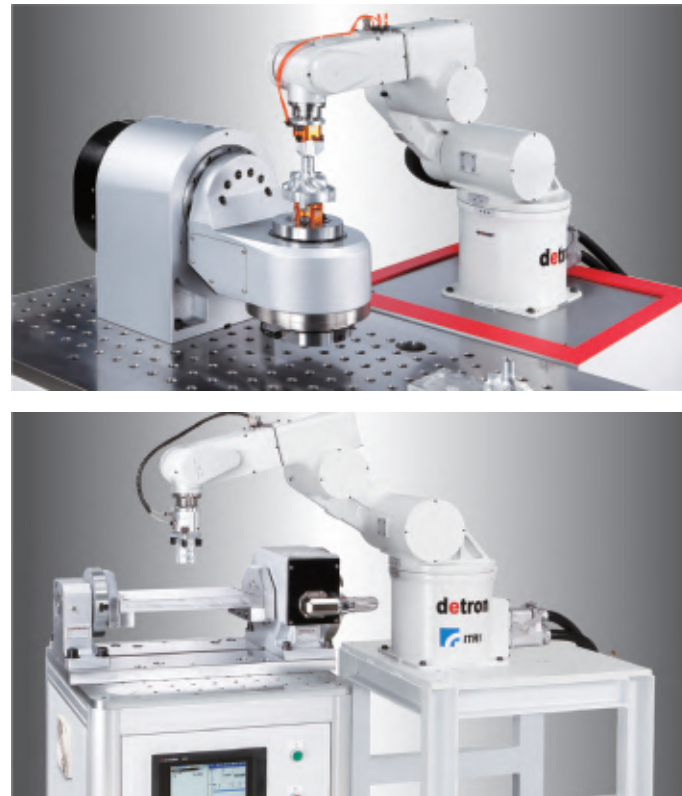


Main Spindle Preload

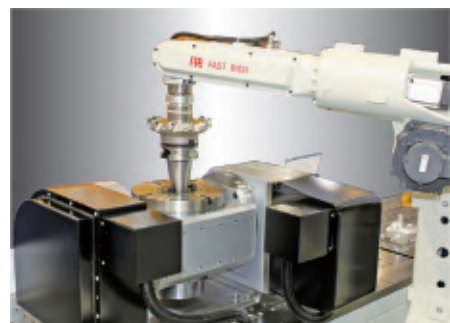




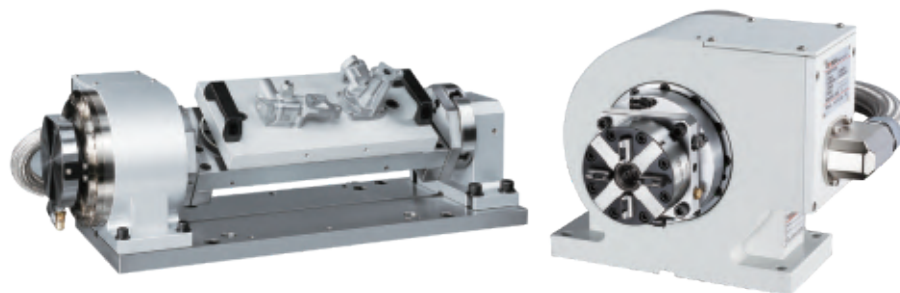
Prepare for Industry 4.0



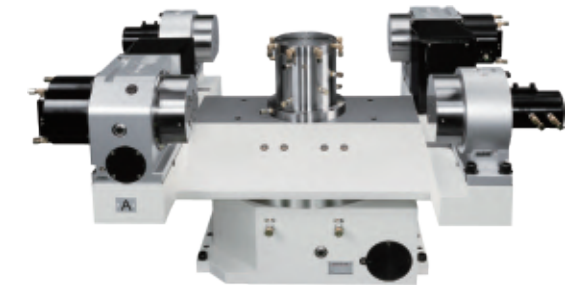
Recommended hardware corroboration in Industrial 4.0 chain.



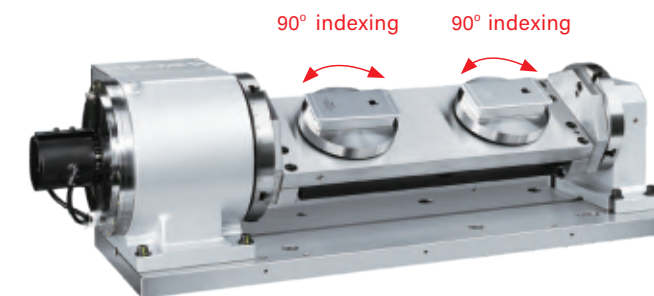
- ▲ Application of BT40/50 arbors as parts fixture jig can be integrated into **Auto Parts-holding** Change system.



- ▲ 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.



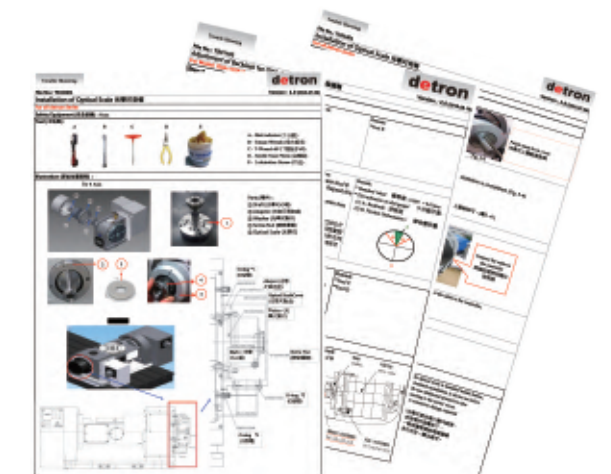
- ▲ Standard **detron** models can be modified to provide additional solutions, such as the standard CX-500 model for example, which could be used as an auto pallet system, which is illustrated above and is renamed the SVW-500.



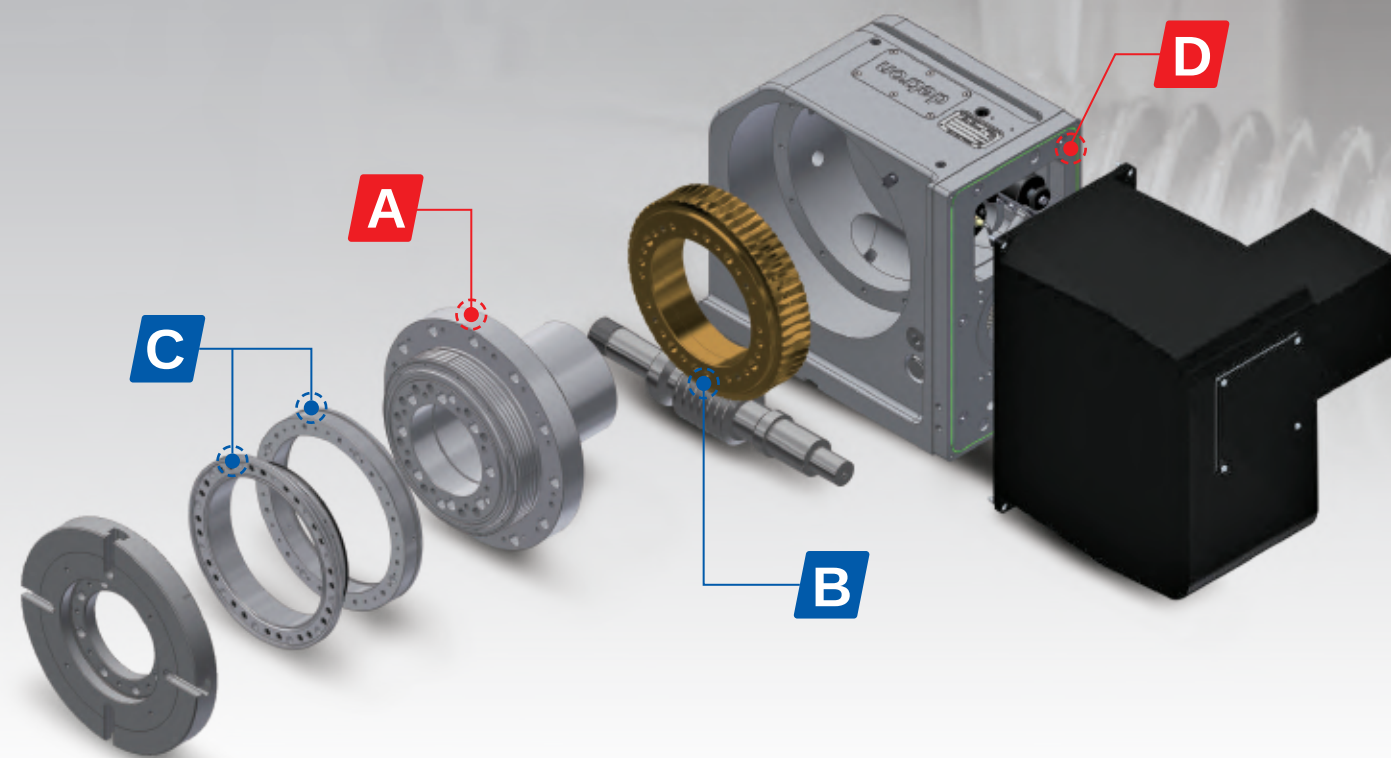
- ▲ A 90 degree indexer can be modified into a 5 face machining system, options include selected number of multiple spindles and various centre distances according to the application.



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

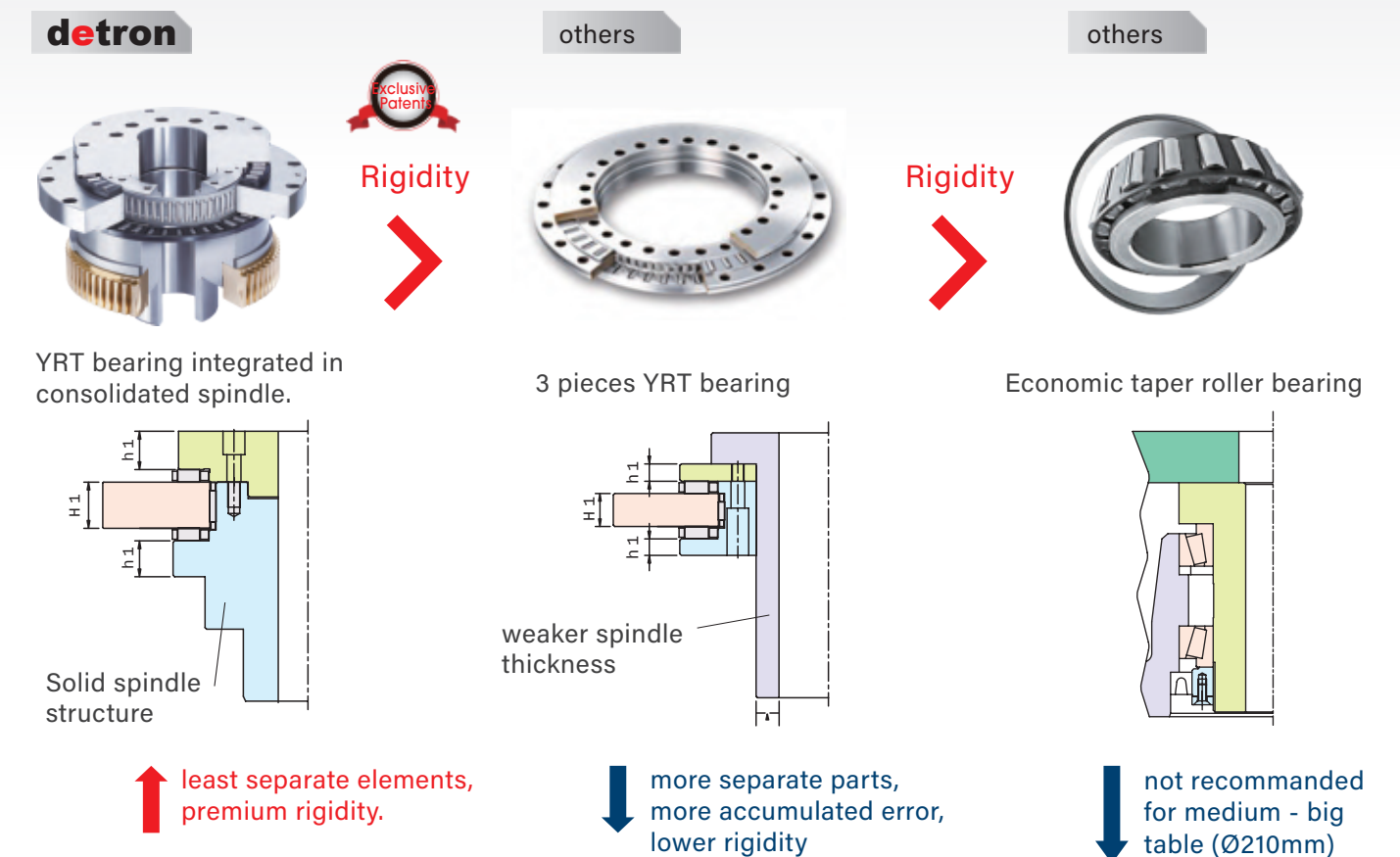


Core Technology – High Rigidity Consolidated Spindle



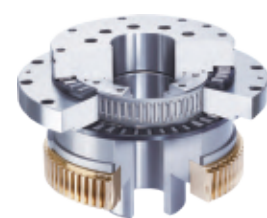
for VMC_Worm Wheel Transmission

Comparison of Spindle and Bearing



- 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.

A High Rigidity Consolidated Spindle



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

-refer to P18 for more details-

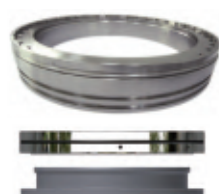
B High Endurable Worm Gear Set



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

-refer to P20 for more details-

C Reliable Clamping Force



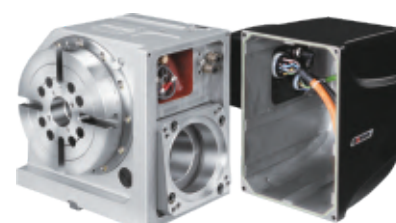
Hydraulic Model:
Special design of drum brake system.



Pneumatic Model:
exclusive patented dual pistons design.

-refer to P19 for more details-

D High Level Waterproof Design

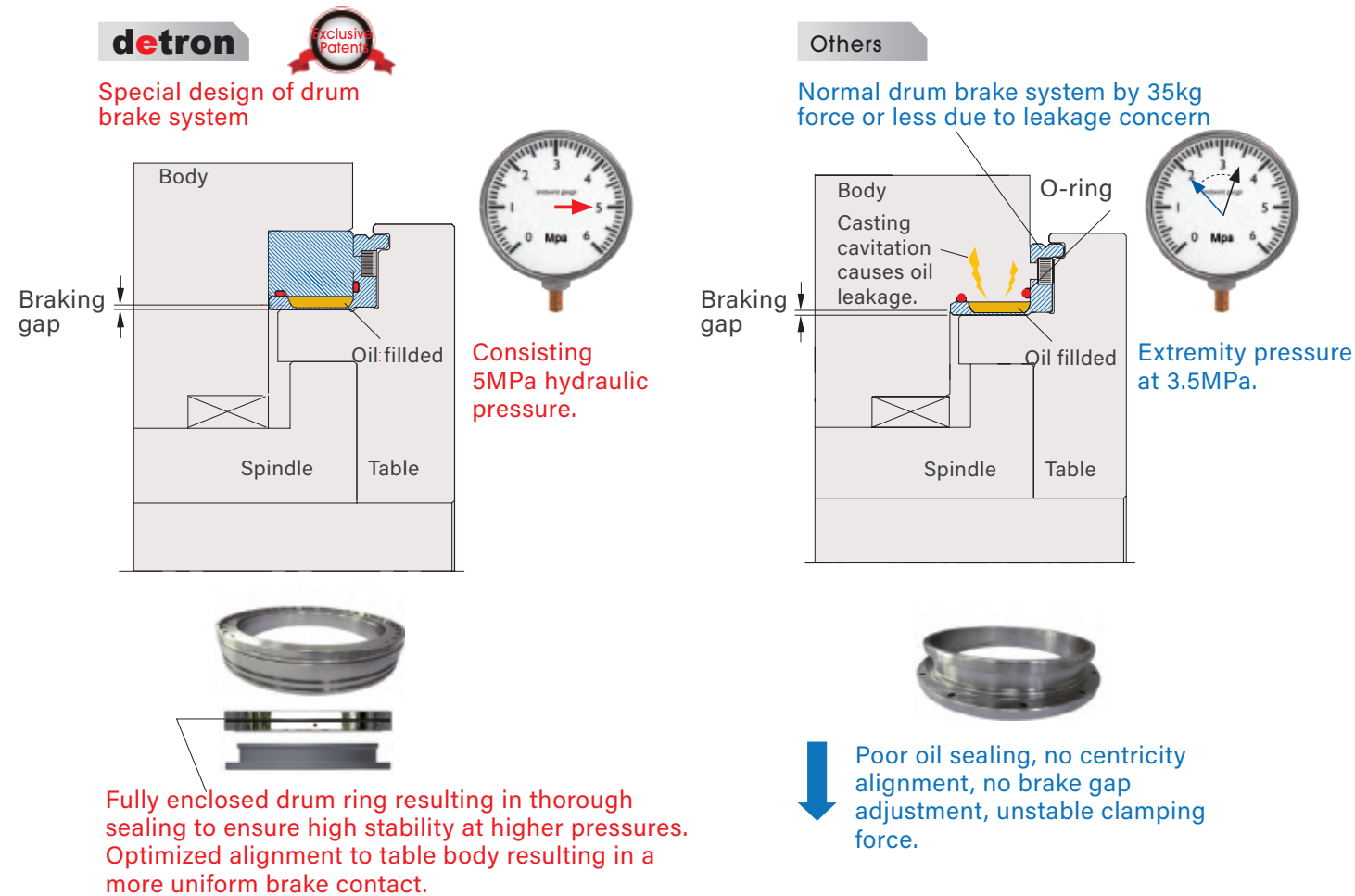


All covers interface with machined groove and Trelleborg seals applied. Waterproof grade IP65.

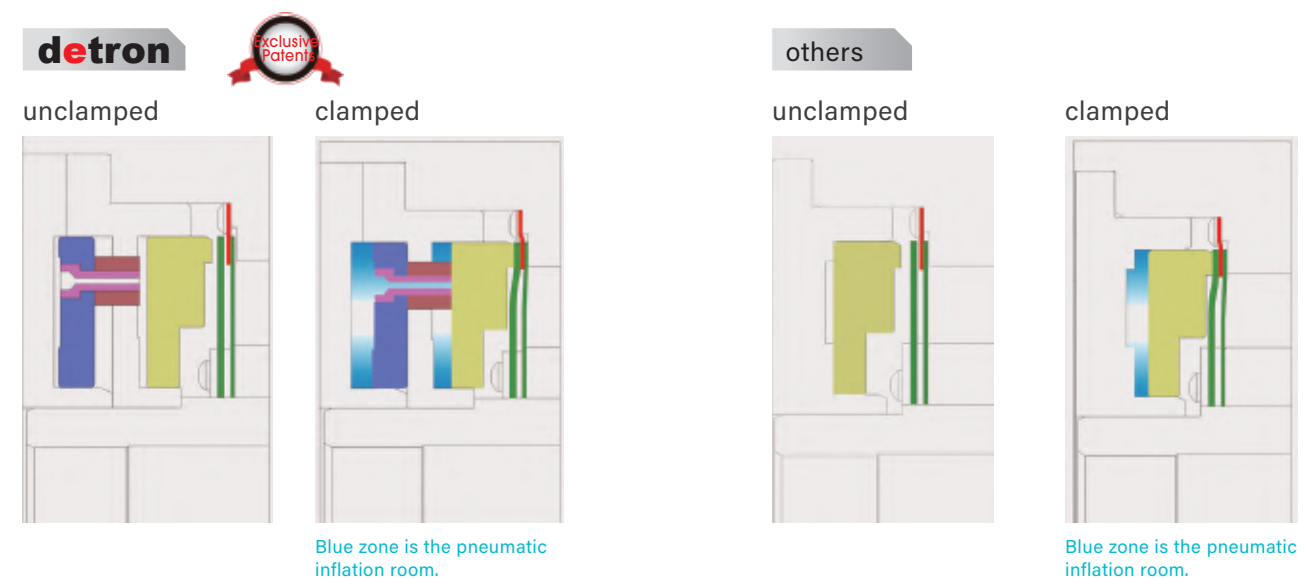
-refer to P21 for more details-

Core Technology — Reliable Clamping Force

Safe and Double Insured Hydraulic Brake



Patented Dual Pneumatic Piston, Braking Force Promoted



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

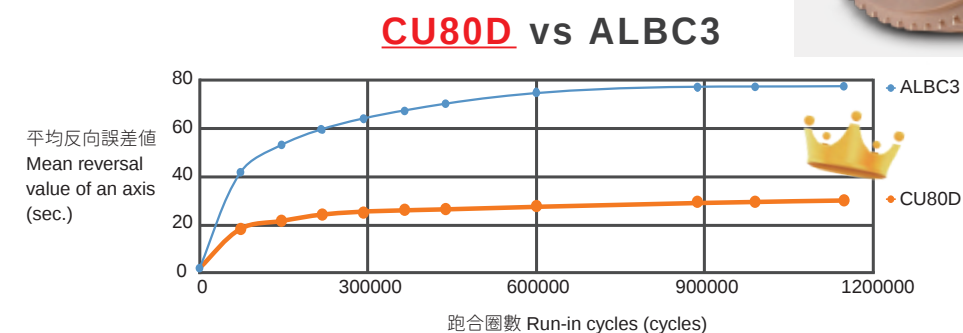
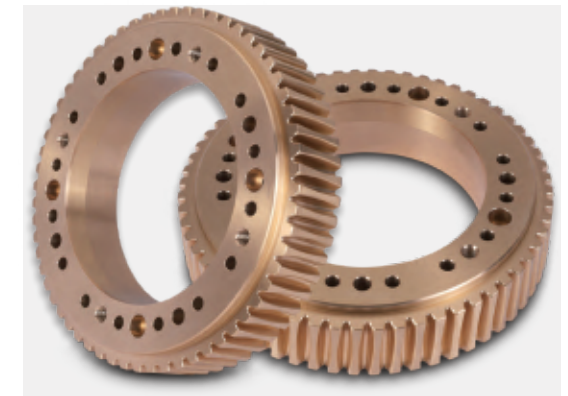
Limited effects by less pneumatic inflation zone of conventional single piston. Lower clamping force.

Core Technology — High Endurable Worm Gear Set

Exclusive Worm Wheel Material -CU80D

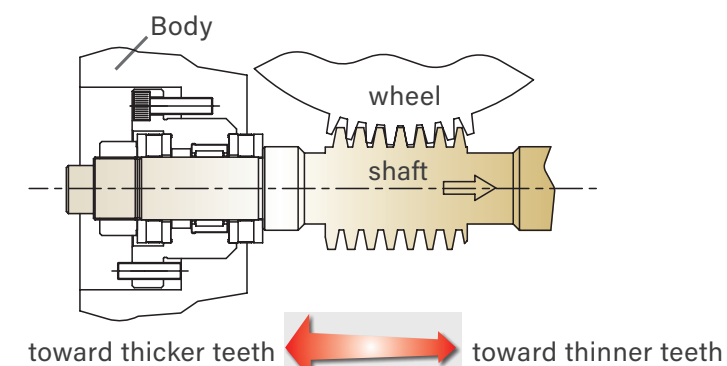
Exclusive application of patented high-endurable copper alloy for detron appointed models.

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



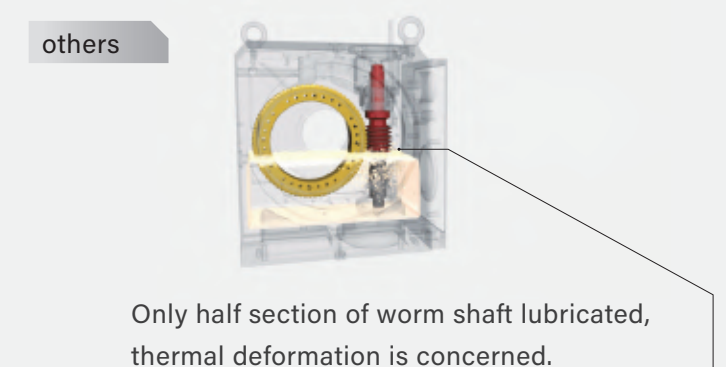
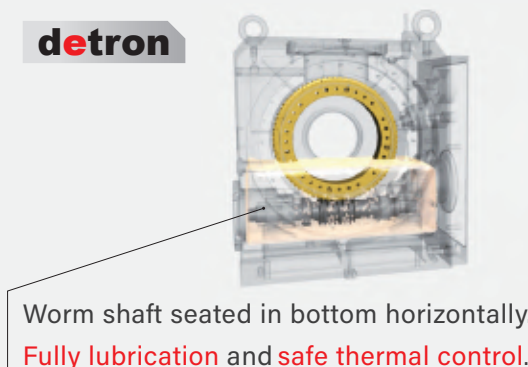
260%
resistance increased

Precise Dual Lead Worm Shaft and Gear

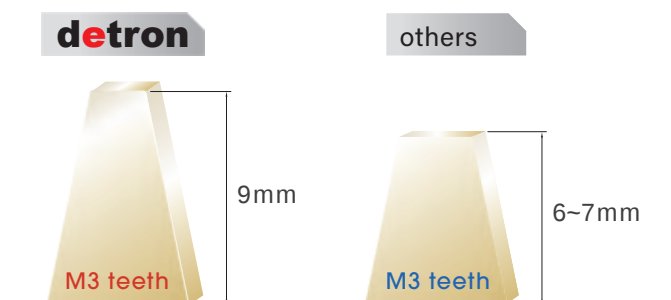


- Offset in axial direction retains **eternal radial geometry accuracy** of worm shaft and wheel.
- Stable gear occlusion accuracy.

Lubrication and Thermal Control



Teeth Module Promoted

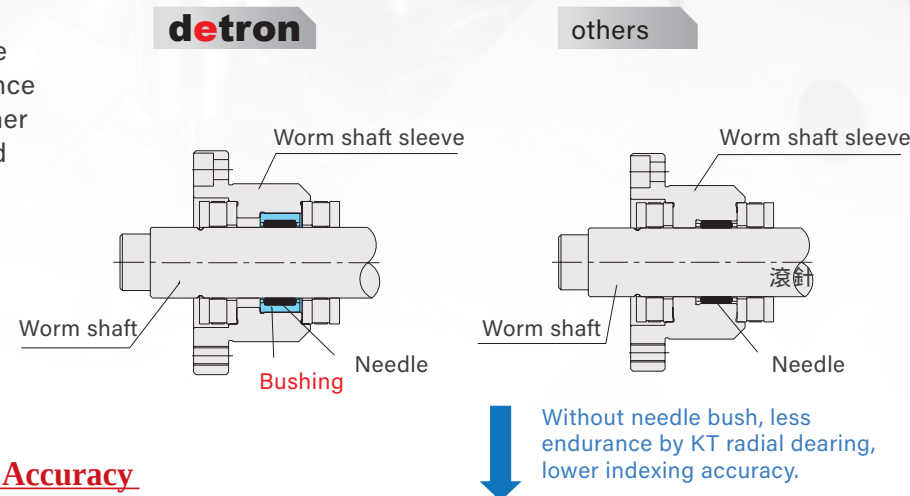


- 30% higher contact surface of gear teeth engagement than conventional worm gear.
- Comparing equal table spec, higher teeth depth provides optimum rigidity for heavy cut.

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.

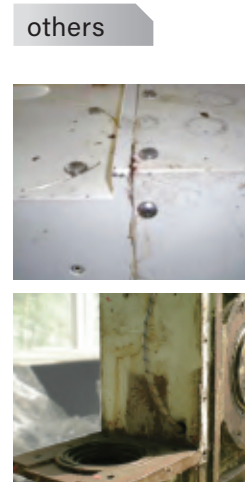
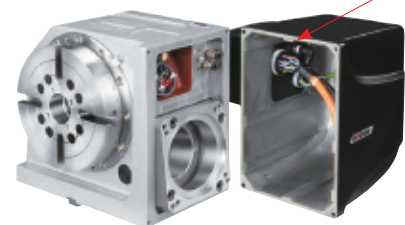


High Concentricity, Consistent Accuracy

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.**

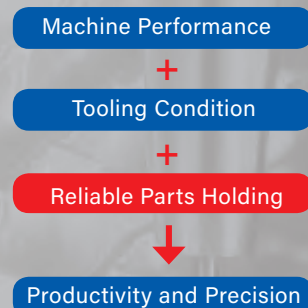
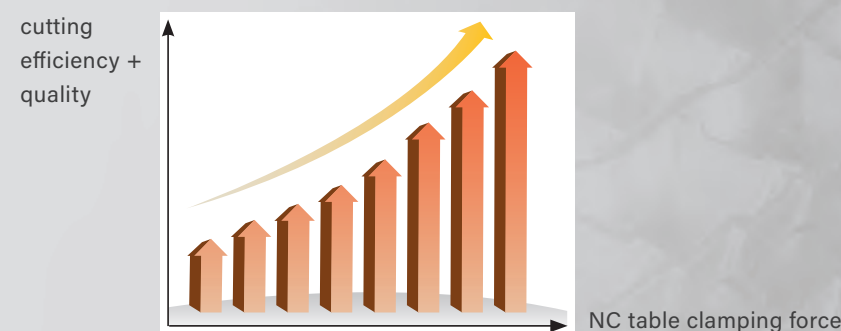
Motor cover interface with machined groove and Trelleborg seals applied.



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.



Core Technology

Grinding of consolidated spindle unit



Grinding of worm shaft teeth

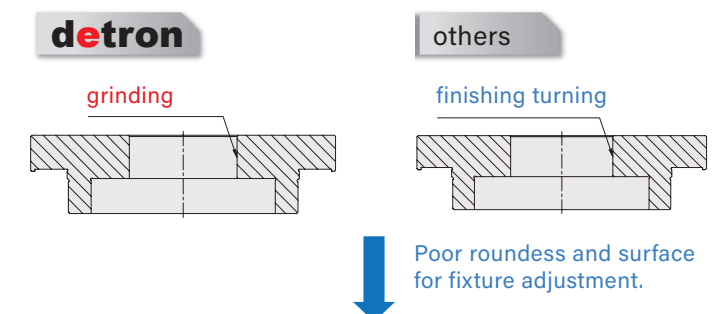


Processing Of Spindle Bore

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.

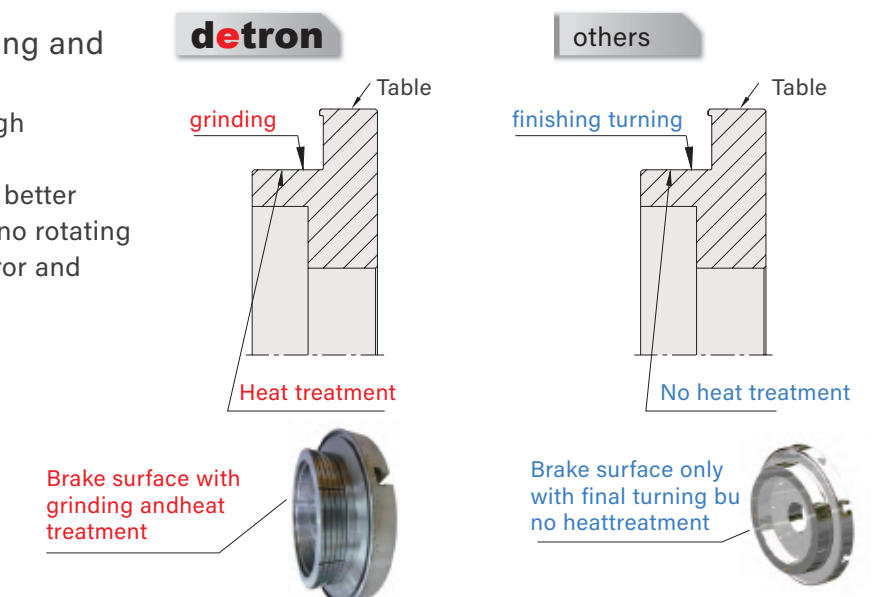


Fine Finishing Machining Of Brake Shaft

Advantages of surface with hardening and grinding

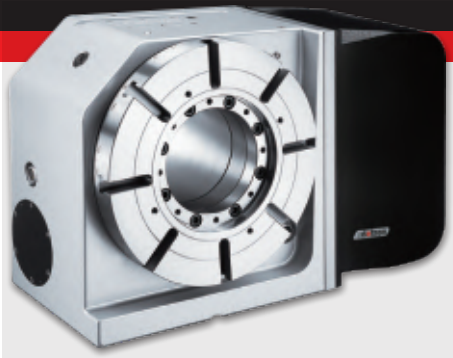
- Least scratch and wearing concerns, high resistance for large clamping force.
- Precision grinding at the brake features better roundness and cylindricity. As a result, no rotating center offset, minimizing positioning error and increased clamping life are ensured.

Increased Clamping Life. No Offset During Braking.

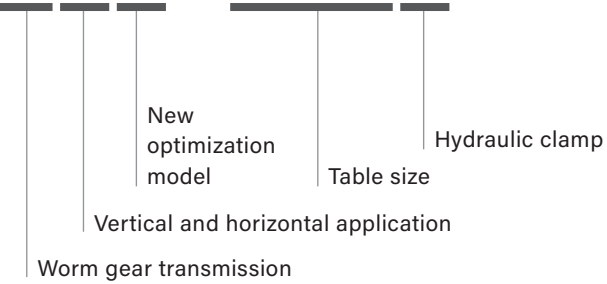


CNC Rotary Table

Ultra Big Spindle Bore, Hydraulic Clamp



G X A - 2 5 5 H



- 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

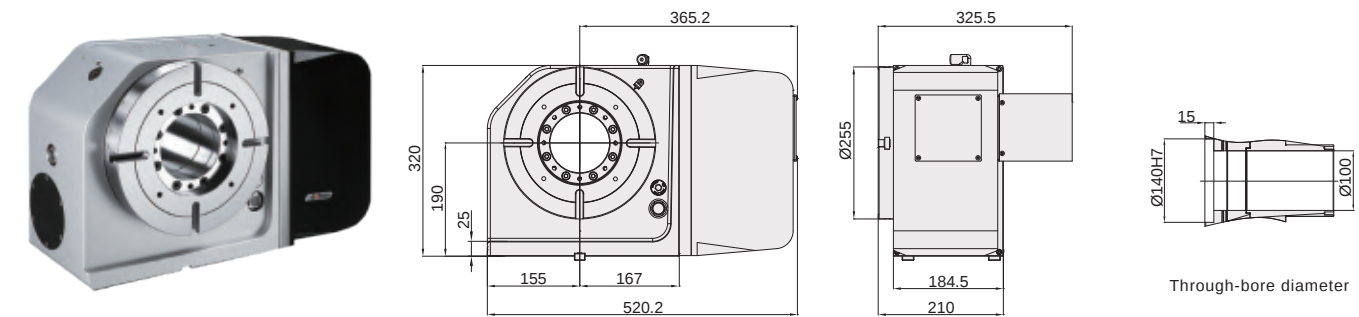
MODEL	Unit	GXA-255H	GXA-320H	GXA-400H
Worktable diameter	mm / inch	Ø255 / Ø 10.04	Ø320 / Ø 12.6	Ø400 / Ø 15.75
Center bore diameter	mm / inch	Ø140H7 / Ø 5.51H7	Ø180H7 / Ø 7.08H7	Ø220H7 / Ø 8.66H7
Through-bore diameter	mm / inch	Ø100 / Ø 3.94	Ø140 / Ø 5.51	Ø180 / Ø 7.09
Height of table (horizontal)	mm / 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 73		
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	250 / 550
	Horizontal	kg / lb	300 / 660	500 / 1100
	Rotary Tailstock applied	kg / lb	300 / 660	500 / 1100
FxL When table clamped		N / lbs	20000 / 4488	28000 / 6283.2
		N.m / ft. lbs.	1700 / 1252.9	3000 / 2211
		N.m / ft. lbs.	900 / 663.3	1600 / 1179.2
Allowable cutting torque		N.m / ft. lbs.	550 / 405.35	780 / 574.86
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.

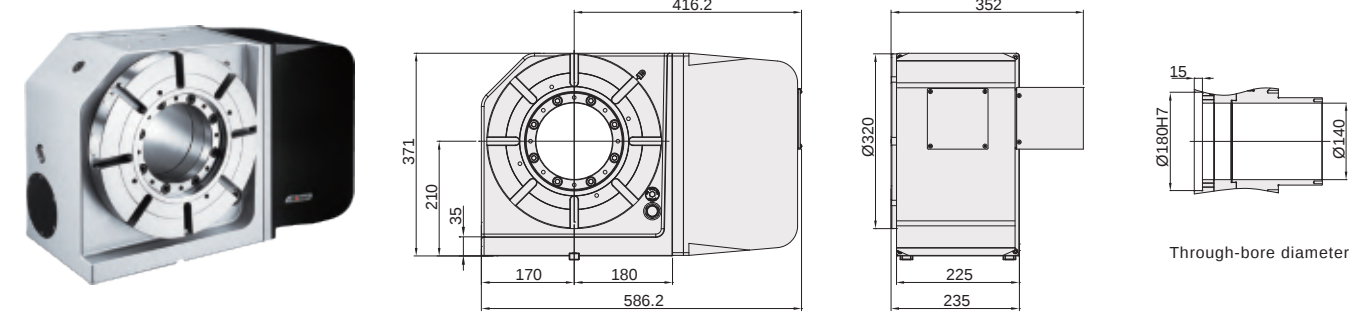
DIMENSIONAL DRAWINGS

Unit : mm

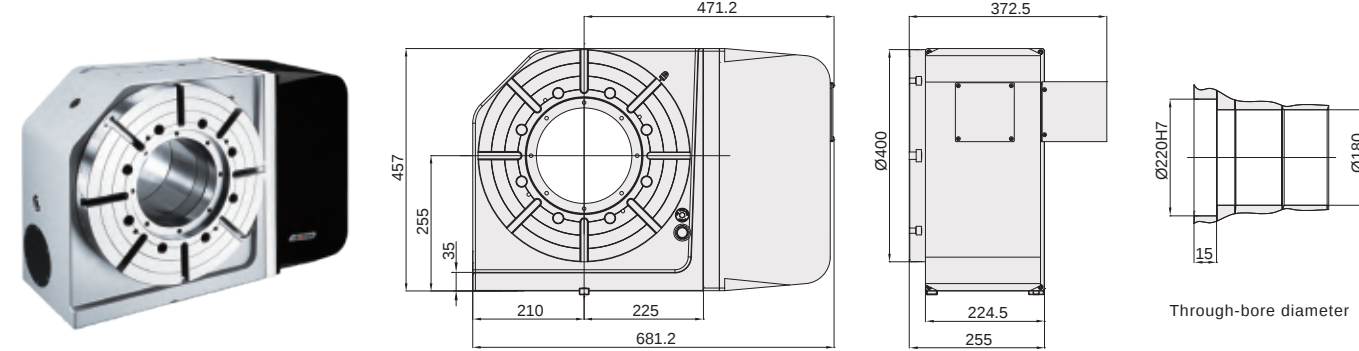
GXA-255H



GXA-320H



GXA-400H



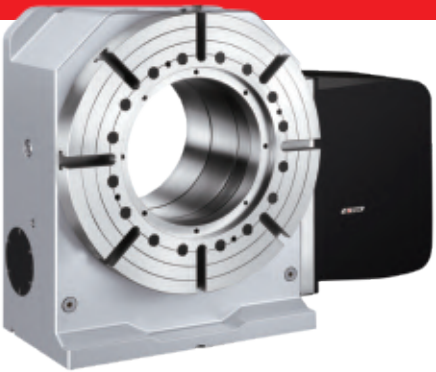
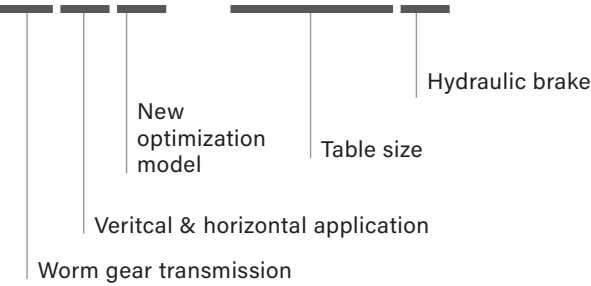
Note: The length of servo guard may vary with servo motor type.
(metal sheet dimensions shown above are based on Fanuc motor)

GXA-H series

CNC Rotary Table

Ultra Big Spindle Bore, Hydraulic Clamp

G X A - 5 0 0 H



- 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

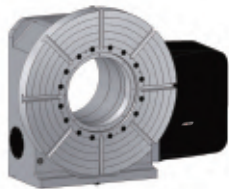
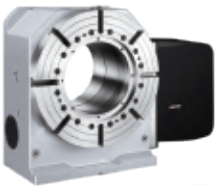
MODEL	Unit	GXA-500H GXA-630EH	GX-630H	GX-800H
Worktable diameter	mm / inch	Ø500 / Ø19.69 Ø630 / Ø24.80	Ø630 / Ø24.80	Ø800 / Ø31.50
Center bore diameter	mm / inch	Ø305H7 / Ø12H7	Ø270H7 / Ø10.63H7	Ø285H7 / Ø11.22H7
Through-bore diameter	mm / inch	Ø265 / Ø10.43	Ø220 / Ø8.66	Ø240 / Ø9.45
Height of table (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 73		
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	800 / 1760
	Horizontal	kg / lb	800 / 1760	1500 / 3300
	Rotary Tailstock applied	kg / lb	800 / 1760	1500 / 3300
FxL When table clamped		N / lbs	45000 / 10098	49000 / 10780
		N.m / ft. lbs.	8300 / 6121.7	8500 / 6264.50
		N.m / ft. lbs.	5700 / 4204.11 4500 / 3319	5200 / 3832.4
Allowable cutting torque		N.m / ft. lbs.	2500 / 1842.5	4300 / 3169.1

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.

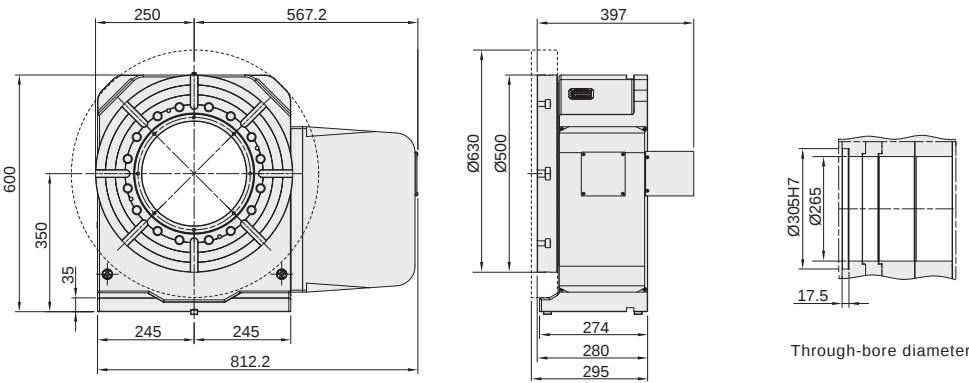
DIMENSIONAL DRAWINGS

Unit : mm

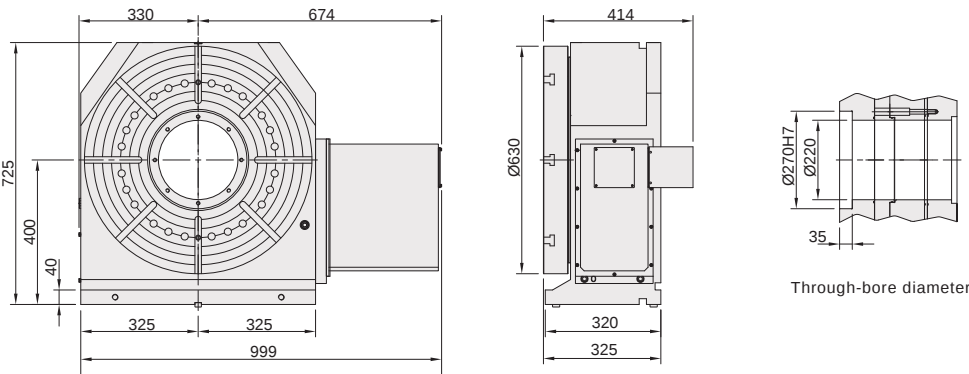
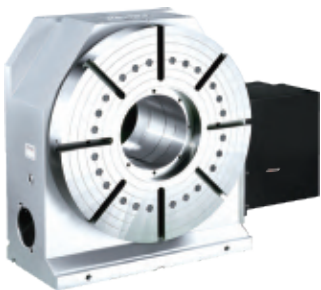
GXA-500H



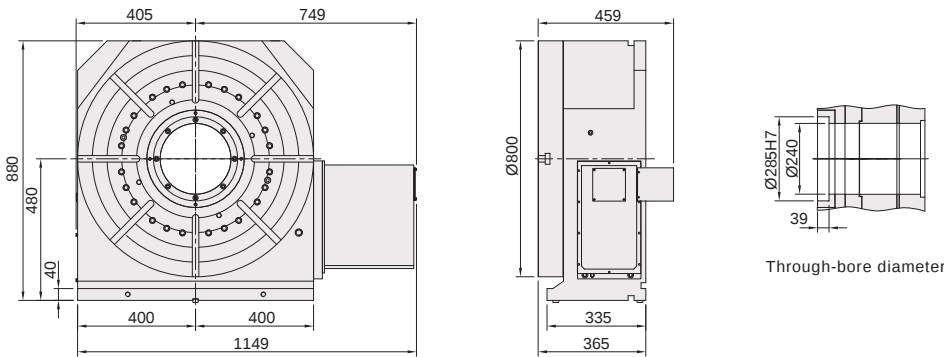
▲ GX-630EH



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)

GXA-L series

CNC Rotary Table

High - Power Clamp, Motor at Left

G X A - 1 7 0 S L

X

Vertical & horizontal application

V

Vertical application

S

Super multiple pneumatic

H

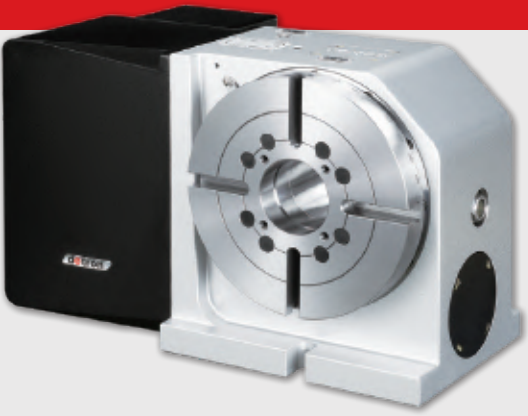
Hydraulic

new optimization mode I

Table size

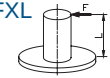
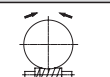
Motor mounted at left side of table

worm gear transmission



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

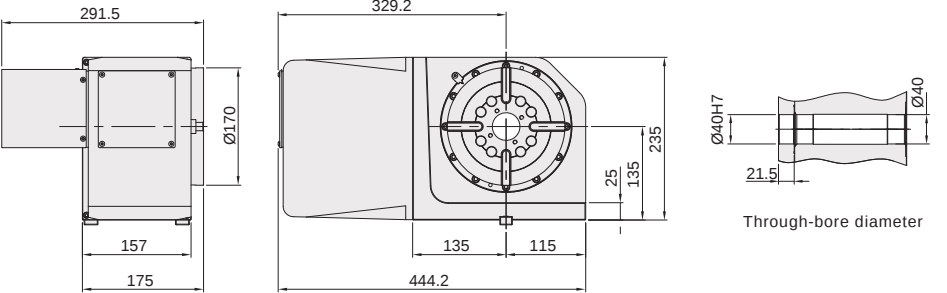
MODEL	Unit	GXA-170SL	GVA-210SL	GXA-255HL
Worktable diameter	mm / inch	Ø170 / Ø 6.69	Ø210 / Ø 8.27	Ø255 / Ø10.04
Center bore diameter	mm / inch	Ø40H7 / Ø 1.57H7	Ø65H7 / Ø 2.56H7	Ø140H7 / Ø 5.51H7
Through-bor diameter	mm / inch	Ø40 / Ø 1.57H7	Ø65 / Ø 2.56H7	Ø100 / Ø 3.94
Height of table (horizontal)	mm / 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 73		
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	150 / 330
	Horizontal	kg / lb	200 / 440	300 / 660
	Rotary Tailstock applied	kg / lb	200 / 440	300 / 660
FxL When table clamped		N / lbs	14000 / 3141.6	17000 / 3814.8
		N.m / ft. lbs.	1020 / 751.74	1265 / 932
		N.m / ft. lbs.	300 / 221.1	400 / 294.8
Allowable cutting torque		N.m / ft. lbs.	200 / 147.41	260 / 191.62
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

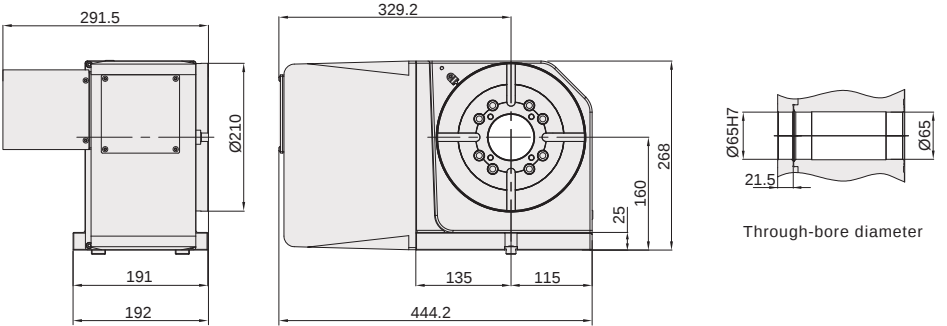
GXA-170SL





Equipped with upgraded high precision cross roller bearing.

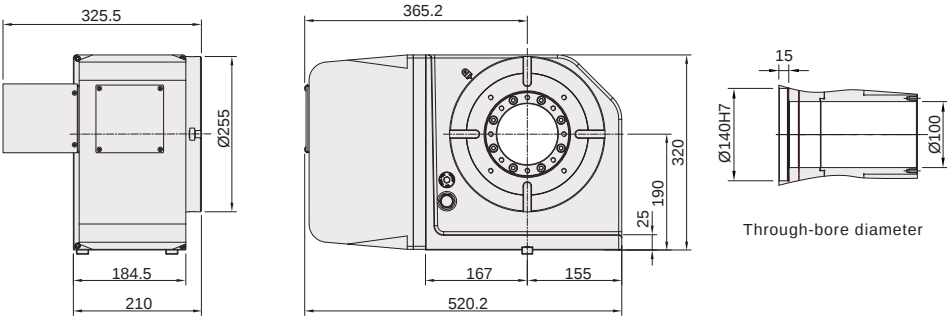
GVA-210SL





Equipped with upgraded high precision cross roller bearing.

GXA-255HL





Consolidated spindle with YRT bearing built-in.

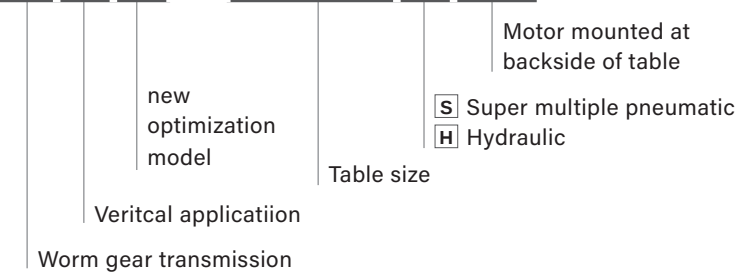
Note: The length of servo guard may vary with servo motor type.
(metal sheet dimensions shown above are based on Fanuc motor)

GVA-B series

CNC Rotary Table

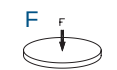
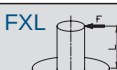
High - Power Clamp, Motor at Back

GVA - 210SB



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

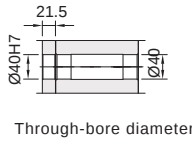
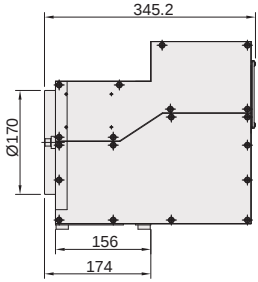
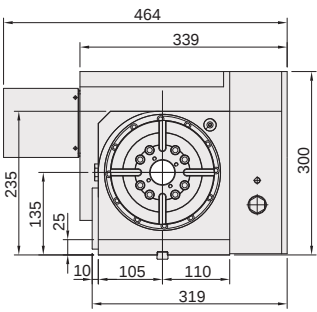
MODEL	Unit	GV-170SB	GVA-210SB	GVA-255HBII
Worktable diameter	mm / inch	Ø170 / Ø6.69	Ø210 / Ø 8.27	Ø255 / Ø10.04
Center bore diameter	mm / inch	Ø40H7 / Ø1.57H7	Ø65H7 / Ø2.6H7	Ø140H7 / Ø 5.51H7
Height of center (vertical)	mm / inch	135 / 5.31	160 / 6.30	190 / 7.48
Width of T-slot	mm / inch	12H7 / 0.47H7	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 73		
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	$\frac{W.D^2}{8}$ 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
	Rotary Tailstock applied	kg / lb	150 / 330	250 / 550
FxL When table clamped	 N / lbs	14000 / 3141.60	17000 / 3814.8	20000 / 4488
	 N.m / ft. lbs.	1020 / 751.74	1265 / 932.3	1700 / 1253.0
	 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

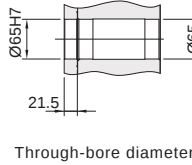
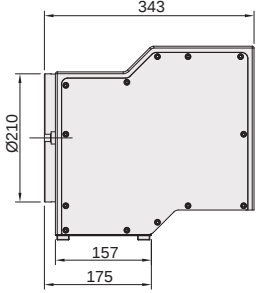
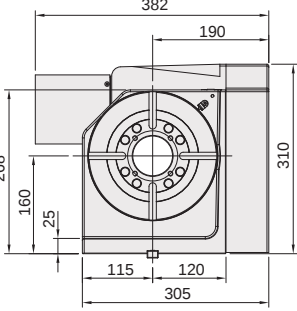
Unit : mm

GV-170SB



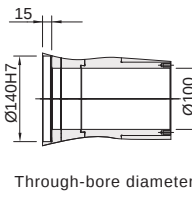
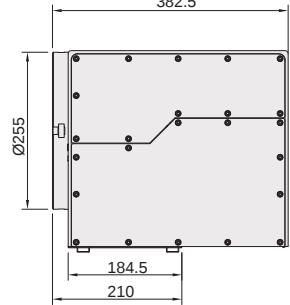
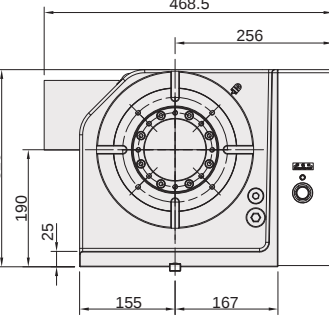
Equipped with upgraded high precision cross roller bearing.

GVA-210SB



Equipped with upgraded high precision cross roller bearing.

GVA-255HBII

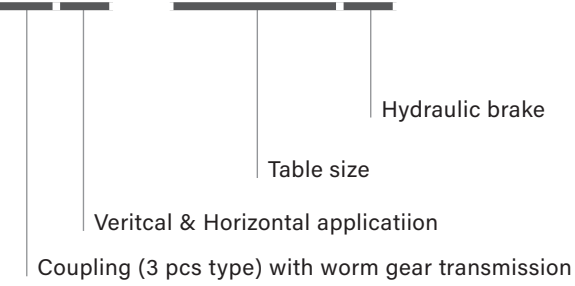


Consolidated spindle with YRT bearing built-in.

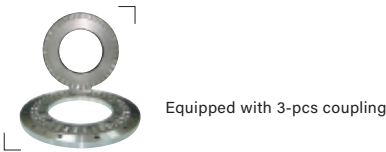
Note: The length of servo guard may vary with servo motor type.
(metal sheet dimensions shown above are based on Fanuc motor)

CNC Index Table

C X - 2 5 5 H



- 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°.



SPECIFICATIONS

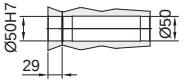
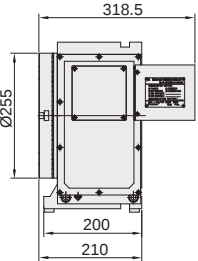
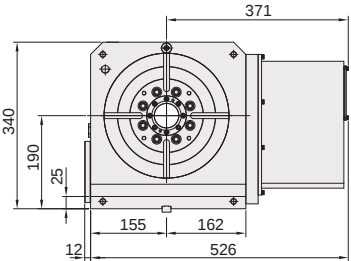
MODEL	Unit	CX-255H	CX-320H	CX-400H	CX-500H
Worktable diameter	mm / inch	Ø255 / Ø10.04	Ø320 / Ø12.60	Ø400 / Ø15.75	Ø500 / Ø19.69
Center bore diameter	mm / inch	Ø50H7 / Ø1.97H7	Ø70H7 / Ø2.76H7	Ø110H7 / Ø4.33H7	Ø130H7 / Ø5.12H7
Through-bore diameter	mm / inch	Ø50 / Ø1.97	Ø70 / Ø2.76	Ø110 / Ø4.33	Ø130 / 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 73				
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	400 / 880
	Horizontal	kg / lb	300 / 660	350 / 770	500 / 1100
	Rotary Tailstock applied	kg / lb	300 / 660	400 / 880	500 / 1100
FxL When table clamped		N / lbs	16000 / 3590.4	20000 / 4488.0	30000 / 6732.0
		N.m / ft. lbs.	1750 / 1289.75	2500 / 1842.5	3000 / 2211.0
		N.m / ft. lbs.	3000 / 2211.0	4000 / 2948.0	5000 / 3685.0
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

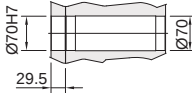
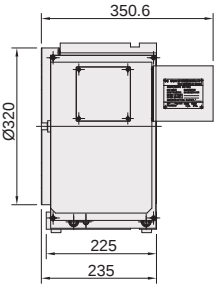
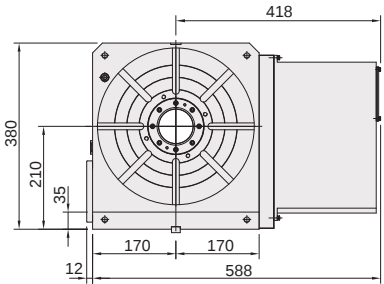
Unit : mm

CX-255H



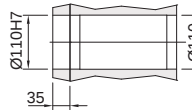
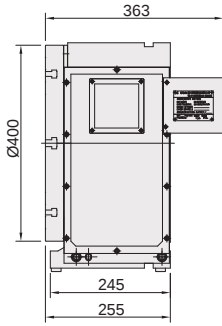
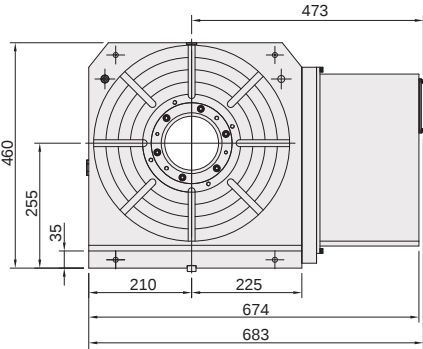
Through-bore diameter

CX-320H



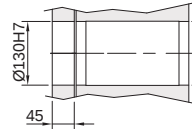
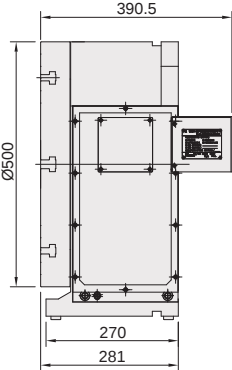
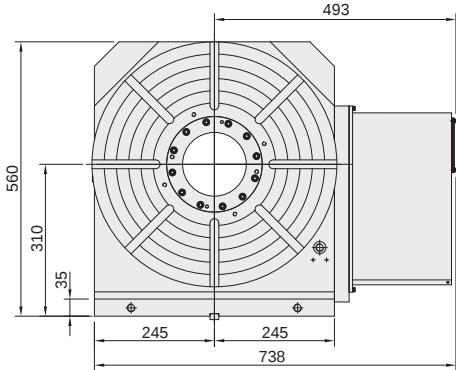
Through-bore diameter

CX-400H



Through-bore diameter

CX-500H



Through-bore diameter

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

ST-T/TP/TH series

Quill Tailstock

Manual Quill Tailstock



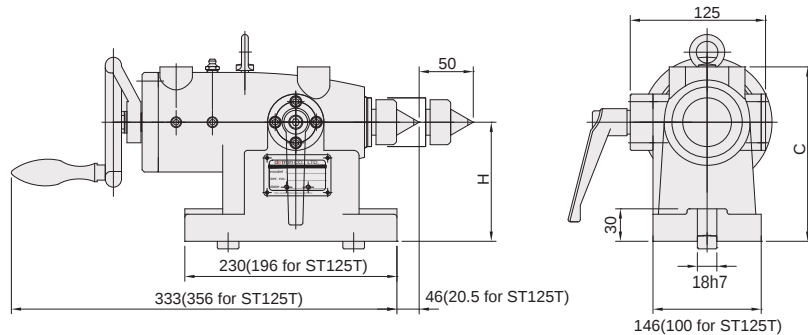
ST - 170 TP

- 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

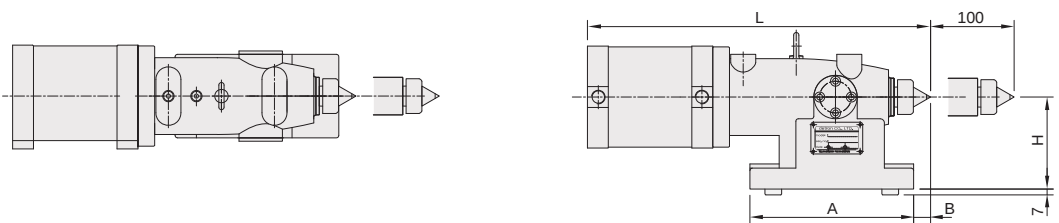
Hydraulic Quill Tailstock



Pneumatic manual switch valve (optional)



Hydraulic manual switch valve (optional)



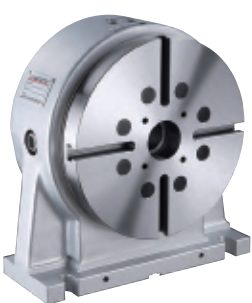
unit: mm/inch

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.

SR-P/H series

Rotary Tailstock



SR - 170 P

- P Pneumatic clamping
- H Hydraulic clamping

Rotary tailstock

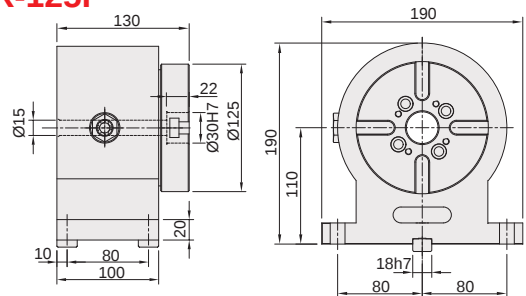
Table size: Ø170

MODEL	SR-125P	SR-170P/H	SR-210P/H	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

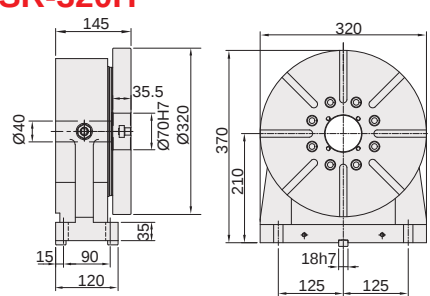
Note: SR rotary tailstock without brake is available, please contact the local agent for application info.

DIMENSIONAL DRAWINGS

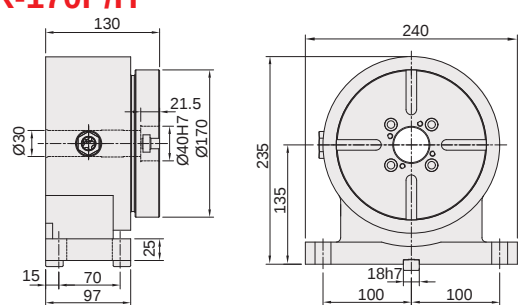
SR-125P



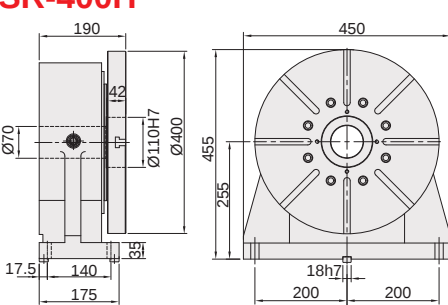
SR-320H



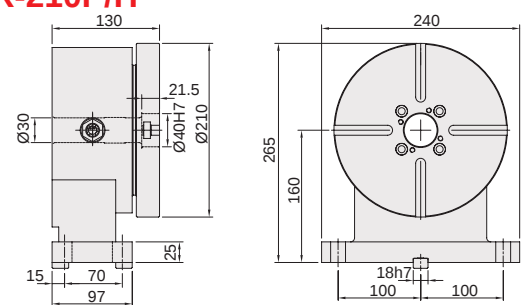
SR-170P/H



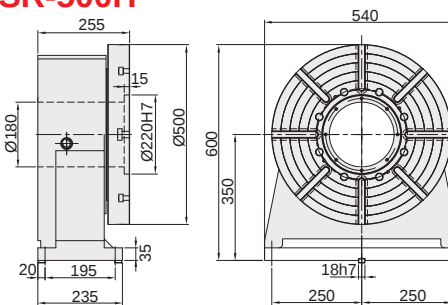
SR-400H



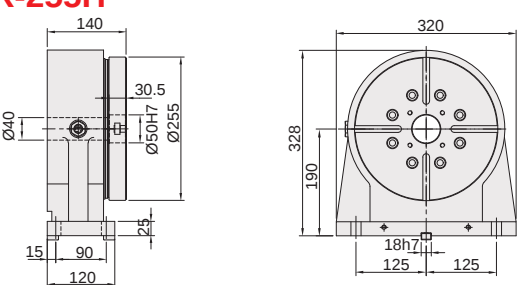
SR-210P/H



SR-500H



SR-255H



CNC Tilting Rotary Table

G F A - 1 2 5 S

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



Worktable diameter Ø100, Ø125, Ø170, Ø200.
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

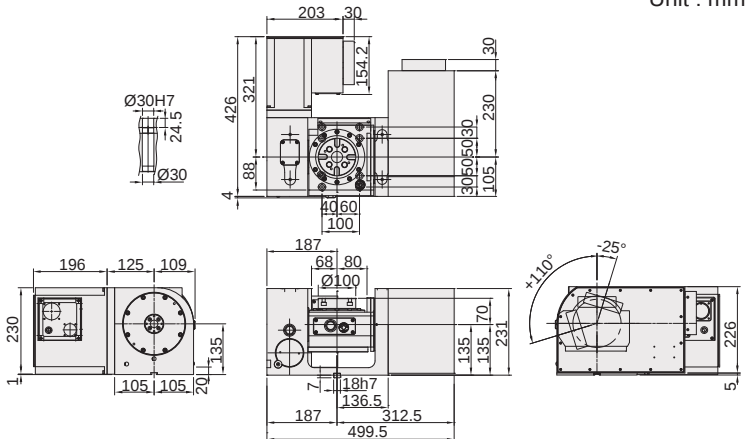
MODEL	Unit	GFA-101S	GFA-125S	GFA-170SII/HII	GFA-200ESII/HII
Worktable diameter	mm / inch	Ø100 / Ø3.94	Ø125 / Ø4.92	Ø170 / Ø6.69	Ø200 / Ø7.87
Center bore diameter	mm / inch	Ø30H7 / Ø1.18H7	Ø30H7 / Ø1.18H7	Ø40H7 / Ø1.57H7	Ø40H7 / Ø1.57H7
Height of table (horizontal)	mm / inch	205 / 8.07	224.5 / 8.84	260 / 10.24	260 / 10.24
Height of center (vertical)	mm / inch	135 / 5.31	160 / 6.30	190 / 7.48	190 / 7.48
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 74				
Transmission ratio		R 1:75	T 1:120	R 1:90	T 1:90
Max. table speed / at specified servo motor speed	min ⁻¹	33.3 / 2500	16.6 / 2000	44.4 / 4000	44.4 / 4000
Clamping torque	N.m / ft. lbs.	200 / 148	250 / 184	140 / 103	300 / 221
Allowable loading capacity	In Horizontal	kg / lb	35 / 77	50 / 110	75 / 165
	In Tilting (0~90°)	kg / lb	20 / 44	35 / 77	50 / 110
Allowable unbalancing work moment	WxL	N.m / ft. lbs.	24 / 17.69	24 / 17.69	40 / 29.5
FxL When table clamped	F	N / lbs	4000 / 897.60	4000 / 897.60	7000 / 1570.8
	FxL	N.m / ft. lbs.	200 / 147.4	140 / 103.2	300 / 221
	FxL	N.m / ft. lbs.	250 / 184.25	300 / 221.1	400 / 295
Allowable loading inertia	$(\frac{W.D^2}{8})$	kg.m ²	0.044	0.1	0.28
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	180 / 396
Allowable cutting torque	N.m / ft. lbs.	85 / 62.65	85 / 62.65	200 / 147.4	200 / 147.4
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.

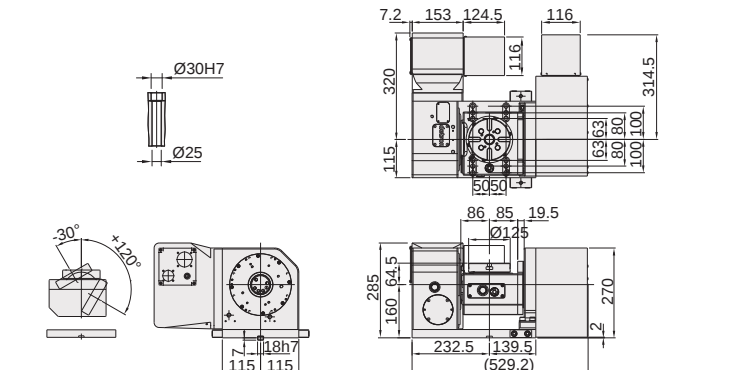
DIMENSIONAL DRAWINGS

Unit : mm

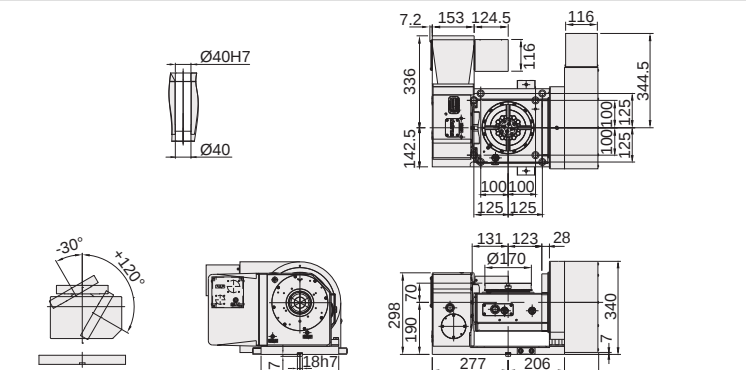
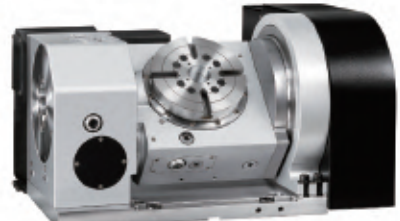
GFA-101S



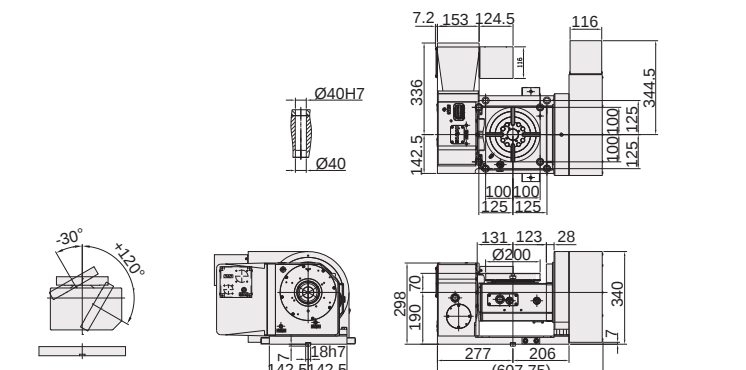
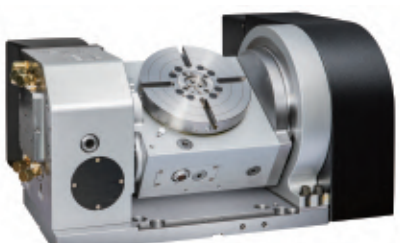
GFA-125S



GFA-170SII/HII



GFA-200ESII/HII

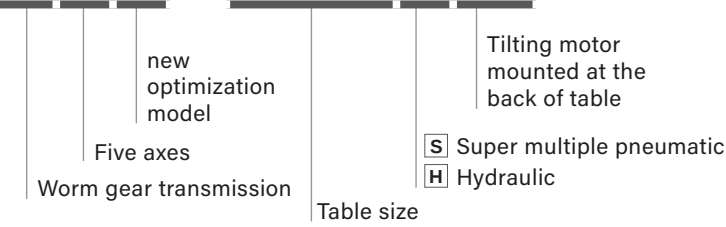


Note: 1. The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown at above are based on Fanuc motor)
2. Allowable wheel torque at table speed of 1 min⁻¹.
3. According to application engineering, optical encoder is recommended for tilting axis.

GFA-H/HB series

CNC Tilting Rotary Table

GFA - 255H(B)



- Worktable diameter Ø210, Ø255, Ø320.
- The hydraulic brake equipped with radial and axial bearings.(P.18)
- Exclusive patented dual pneumatic piston braking system.(P.19) (GFA-210S)
- Enlarged the high precision cross roller bearing. (GFA-210S)
- 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. (GFA-255H/GFA-320H)

SPECIFICATIONS

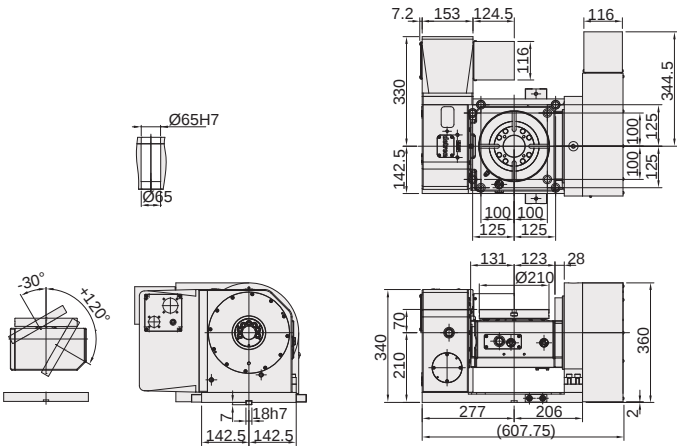
MODEL		Unit	GFA-210S/H		GFA-255H/HB		GFA-320H	
Worktable diameter		mm / inch	Ø210 / Ø8.26		Ø255 / Ø10.04		Ø320 / Ø12.60	
Center bore diameter		mm / inch	Ø65H7 / Ø2.55H7		Ø140H7 / Ø5.51H7		Ø180H7 / Ø7.09H7	
Height of table (horizontal)		mm / inch	280 / 11		325 / 12.8		355 / 13.98	
Height of center (vertical)		mm / inch	210 / 8.26		225 / 8.86		255 / 10.04	
Width of T-slot		mm / inch	12H7 / 0.47H7		12H7 / 0.47H7		14H7 / 0.55H7	
Width of guide block		mm / inch	18 / 0.71		18 / 0.71		18 / 0.71	
Clamping method /pressure		MPa / psi	S:0.55~0.7 / 79.7~101 H:2.5 / 362.5		Hydraulic 5 / 725		Hydraulic 5 / 725	
Servo motor spec		refer to page 74						
Transmission ratio			R	T	R	T	R	T
			1:90	1:90	1:90	1:120	1:120	1:120
Max. table speed / at specified servo motor speed		min ⁻¹	33.3 / 3000	22.2 / 2000	22.2 / 2000	16.6 / 2000	22.2 / 2664	16.6 / 2000
Clamping torque		N.m / ft. lbs.	400 / 295 600 / 442	600 / 442 800 / 590	900 / 663.8	900 / 663.8	1600 / 1179.2	1600 / 1179.2
Allowable loading capacity	In Horizontal 	kg / lb	100 / 220		120 / 264		200 / 440	
	In Tilting (0~90°) 	kg / lb	70 / 154		90 / 166.33		150 / 330	
Allowable unbalancing work moment	WxL 	N.m / ft. lbs.	62 / 46		92 / 68		130 / 95.8	
FxL When table clamped	F 	N / lbs	14000 / 3147		16000 / 3590.40		20000 / 4488.0	
	FxL 	N.m / ft. lbs.	400 / 295 600 / 442		900 / 663.8		1600 / 1179.2	
	FxL 	N.m / ft. lbs.	600 / 442 800 / 590		900 / 663.8		1600 / 1179.2	
Allowable loading inertia	$(\frac{W.D^2}{8})$ 	kg.m ²	0.55		0.98		2.6	
Resolution		deg.	0.001		0.001		0.001	
Indexing accuracy		sec	15"	50"	15"	50"	15"	50"
Repeatability		sec	6"	8"	6"	8"	6"	8"
Tilting angle range		deg.	-30 ~ +120		-30 ~ +120		-30 ~ +120	
Net weight (servo motor excluded)		kg / lb	230 / 507		320 / 704 347 / 765		470 / 1037	
Allowable cutting torque		N.m / ft. lbs.	250 / 184		370 / 272.9		780 / 569.4	
Allowable Max. rotary joint quantity		Port	4		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.

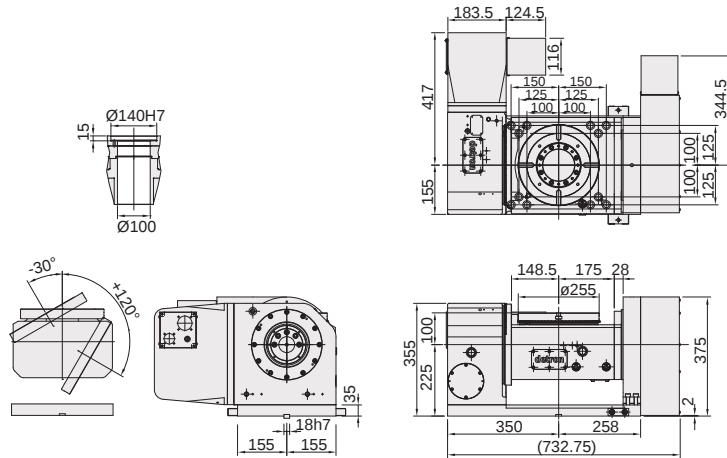
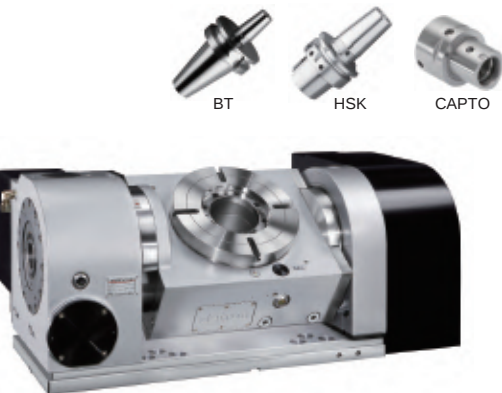
DIMENSIONAL DRAWINGS

Unit : mm

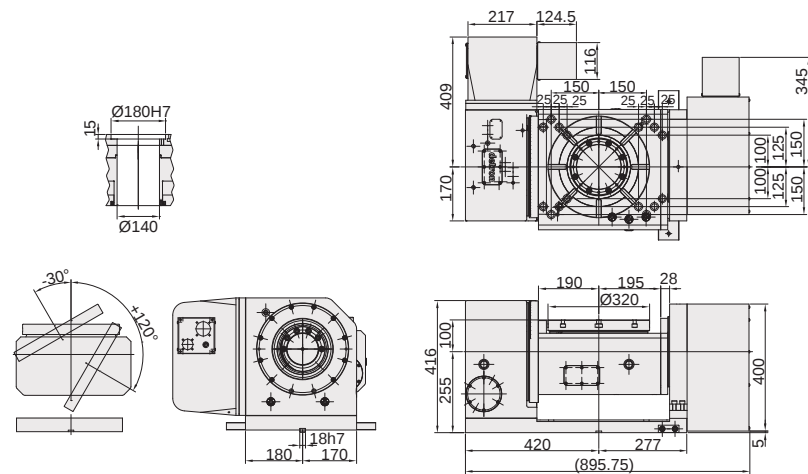
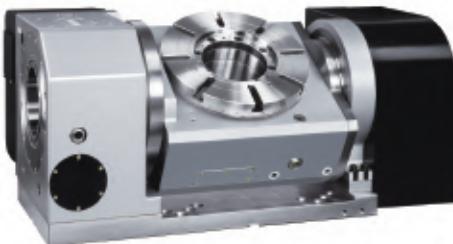
GFA-210S/H



GFA-255H Optional Interface For BT / HSK / CAPTO Tool Holder



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 1 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

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 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.

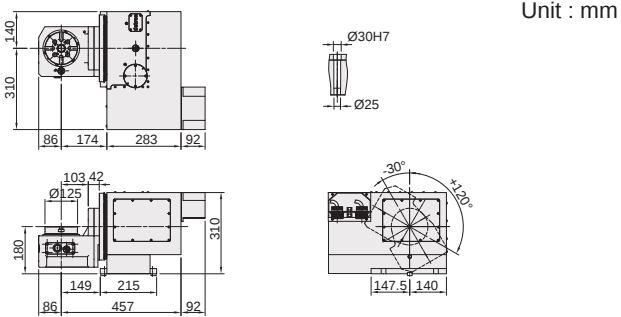
SPECIFICATIONS

MODEL		Unit	GTFAS-125S		GTFAE-210S		GTFAE-320XB/H		GTFAE-410XB		
Worktable diameter		mm / inch	Ø125 / Ø4.92		Ø210 / Ø8.27		Ø320 / Ø12.60		Ø410 / Ø16.14		
Center bore diameter		mm / inch	Ø30H7 / Ø1.18H7		Ø40H7 / Ø1.57H7		Ø50H7 / Ø1.97H7		Ø70H7 / Ø2.76H7		
Height of table (horizontal)		mm / inch	180 / 7.09		375 / 14.76		365 / 14.37 317 / 12.48		411 / 16.18		
Height of center (vertical)		mm / inch	180 / 7.09		375 / 14.76		365 / 14.37 317 / 12.48		411 / 16.18		
Width of T-slot		mm / inch	12H7 / 0.47H7		12H7 / 0.47H7		12H7 / 0.47H7		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		
Servo motor spec			refer to page 74								
Transmission ratio			R	T	R	T	R	T	R	T	
			1:60	1:90	1:90	1:90	1:100	1:120	1:120	1:150	
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	
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	
Allowable loading capacity	In Horizontal 	kg / lb	30 / 66		100 / 220		200 / 440		300 / 661		
	In Tilting (0~90°) 	kg / lb	30 / 66		70 / 154.3		200 / 440		300 / 661		
Allowable unbalancing work moment	WxL 	N.m / ft. lbs.	27 / 19.91		53 / 39.06		100 / 73.70		200 / 147.40		
FxL When table clamped	F 	N / lbs	2800 / 629.5		14000 / 3141.60		16000 / 3590.40		20000 / 4488.0		
	FxL 	N.m / ft. lbs.	140 / 103.26		400 / 295		750 / 553.17		1600 / 1180		
	FxL 	N.m / ft. lbs.	900 / 663.8		600 / 442.48		1500 / 1106.25		2000 / 1475		
Allowable loading inertia	($\frac{W.D^2}{8}$) 	kg.m ²	0.06		0.55		2.6		4.3		
Resolution		deg.	0.001		0.001		0.001		0.001		
Indexing accuracy		sec	40"	60"	20"	60"	20"	60"	15"	60"	
Repeatability		sec	6"	8"	6"	8"	6"	8"	6"	8"	
Tilting angle range		deg.	-30 ~ +120		-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		
Allowable cuting torque		N.m / ft. lbs.	85 / 62.69		260 / 191.6		550 / 401.5		780 / 569.4		
Allowable Max. rotary joint quantity		Port	-		4		6		6		

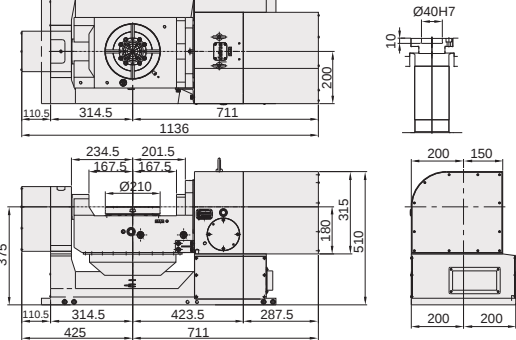
- Note: 1. P: Pneumatic H:Hydraulic R: Rotary Axis T: Tilt Axis
2. For the motor model selection of GTFAS125S, please contact us.
3. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

DIMENSIONAL DRAWINGS

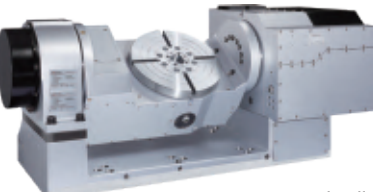
GTFAS-125S



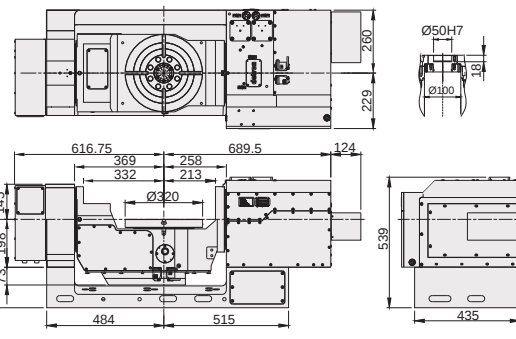
GTFAE-210S



GTFAE-320XB



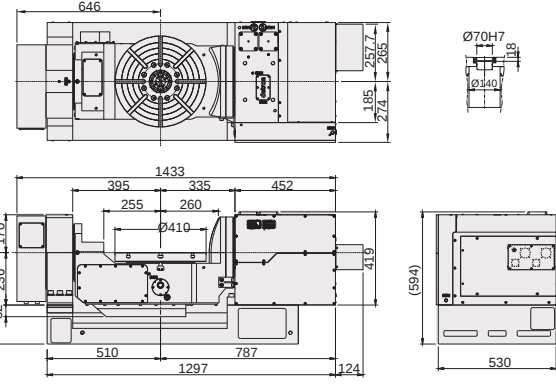
air-oil converter built-in



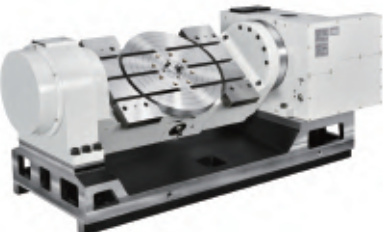
GTFAE-410XB



air-oil converter built-in



▲ Optional: Motor Cover At Front (GTFA350H)



▲ GTFAE-410HBL With Customized Base

- 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

G T F A - 6 5 0 E H B

Five axis

Trunnion type for lower gravity

Worm gear transmission

Table size

new optimization model

E Enlarged worktable

R Reduced worktable

X hydraulic clamp by air booster converter built-in

S superior pneumatic clamp

H hydraulic brake

Tilting motor mounted at the back of table



- 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.

SPECIFICATIONS

MODEL		Unit	GTFAE-500XB		GTFA-650EHB		GTFAI-650EHB GTFAI-720EHB	
Worktable diameter		mm / inch	Ø500 / Ø19.69		Ø650x520W / Ø26x20W		Ø650x520W / Ø26x20W Ø720 / Ø28	
Center bore diameter		mm / inch	Ø70H7 / Ø2.76H7		Ø70H7 / Ø2.76H7		Ø70H7 / Ø2.76H7	
Height of table (horizontal)		mm / inch	460 / 18.11		295 / 12		250 / 9.8	
Height of center (vertical)		mm / inch	460 / 18.11		345 / 14		300 / 11.8	
Width of T-slot		mm / inch	14H7 / 0.55H7		18H7 / 0.7H7		18H7 / 0.7H7	
Clamping method /pressure		MPa / psi	*P: 0.6~0.7 / 87~101.5		*H:4 / 580		*H:4 / 580	
Servo motor spec			refer to page 74					
Transmission ratio			R 1:120 T 1:180		R 1:72 T 1:120		R 1:72 T 1:120	
Max. table speed / at specified servo motor speed		min ⁻¹	16.6 / 2000 11.1 / 2000		25 / 1800 25 / 3000		25 / 1800 25 / 3000	
Clamping torque		N.m / ft. lbs.	2500/1843.75 3000/2212.5		2000 3400		2000 3400	
Allowable loading capacity	In Horizontal 	kg / lb	500 / 1102		300 / 660		300 / 660	
	In Tilting (0~90°) 	kg / lb	500 / 1102		300 / 660		300 / 660	
Allowable unbalancing work moment	WxL 	N.m / ft. lbs.	300 / 221.0		300 / 221		300 / 221	
FxL When table clamped	F 	N / lbs	30000 / 6744		30000 / 6744		30000 / 6744	
	FxL 	N.m / ft. lbs.	2500 / 1844		2000 / 1475		2000 / 1475	
	FxL 	N.m / ft. lbs.	3000 / 2213		3400 / 2508		3400 / 2508	
Allowable loading inertia	$(\frac{W.D^2}{8})$ 	kg.m ²	9.6		9.4		9.4	
Resolution		deg.	0.001		0.001		0.001	
Indexing accuracy		sec	15" 60"		15" 60"		15" 60"	
Repeatability		sec	6" 8"		6" 8"		6" 8"	
Tilting angle range		deg.	-120 ~ +30		-90 ~ +110		-90 ~ +110	
Net weight (servo motor excluded)		kg / lb	1270 / 2794		1228		1178	
Allowable cutting torque		N.m / ft. lbs.	1700 / 1254		1700 / 1254		1700 / 1254	
Allowable Max. rotary joint quantity		Port	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.

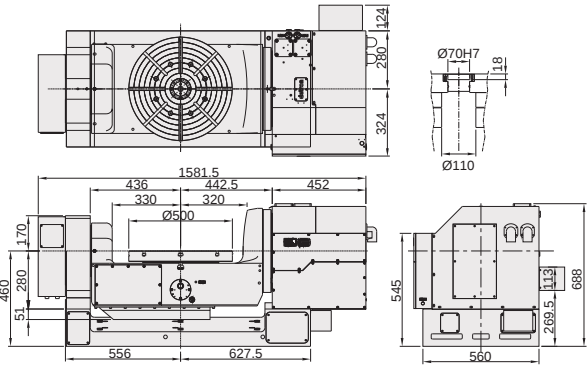
DIMENSIONAL DRAWINGS

Unit : mm

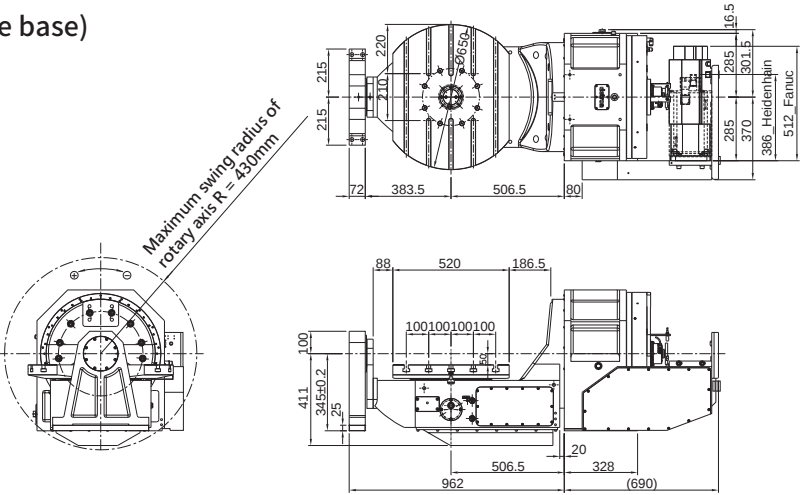
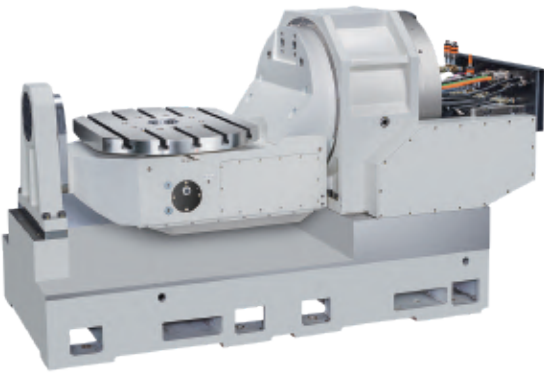
GTFAE-500XB



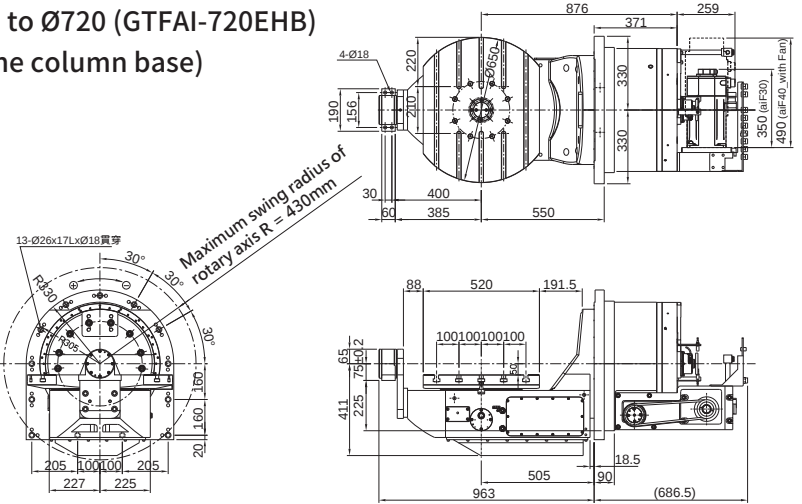
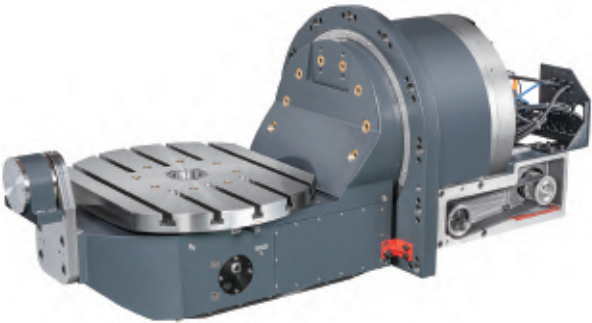
With 2 sets of built-in air-booster



GTF-A650EHB (Tilting axis fixed on machine base)



GTF-A650EHB Worktable can be enlarged to Ø720 (GTF-A720EHB)
(Tilting axis fixed on machine column base)

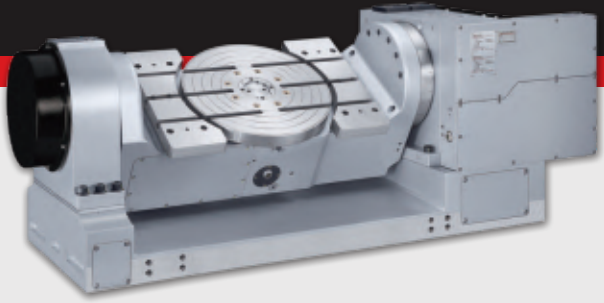
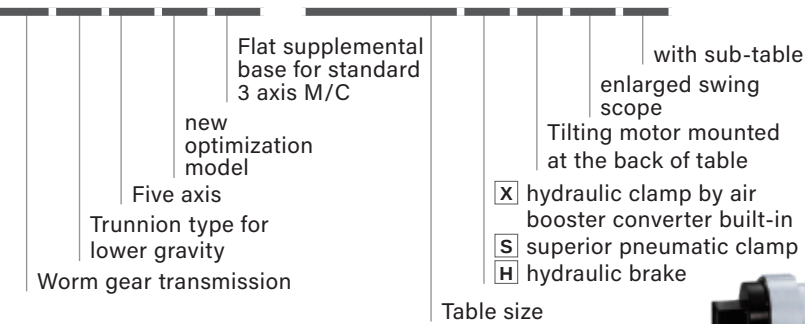


Note: 1. The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown at above are based on Fanuc motor)
2. Allowable wheel torque at table speed of 1 min⁻¹.
3. According to application engineering, optical encoder is recommended for tilting axis.
4. Customized table Ø630mm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

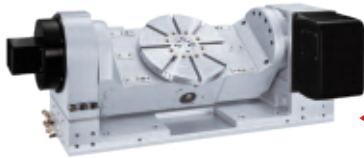
GTFAE-L(S) series

CNC Trunnion Tilting Rotary Table

GTFAE-410XBL S



- | 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.

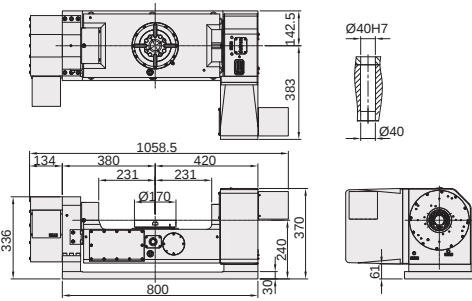
SPECIFICATIONS

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 74					
Transmission ratio			R	T	R	T	R	T	R	T	R	T
			1/90	1/90	1:90	1:120	1:100	1:120	1:120	1:150 1:120	1:120	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	
	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 	N.m / ft. lbs.	300 / 221		400 / 295		750 / 553.17		1600 / 1180		2500 / 1843.75	
	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.

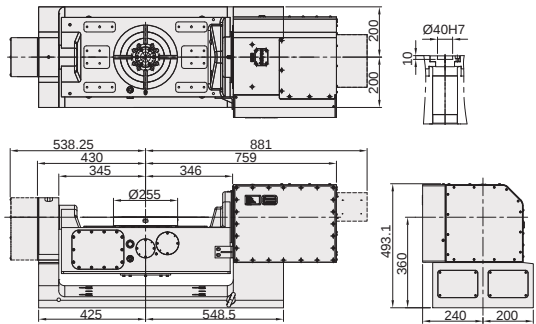
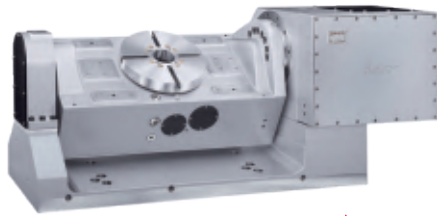
DIMENSIONAL DRAWINGS

GTFAE-170SL



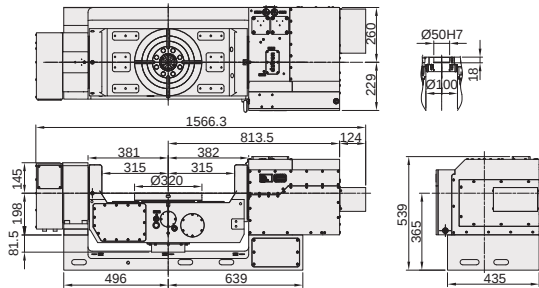
Unit : mm

GTFAE-255SBL(S)



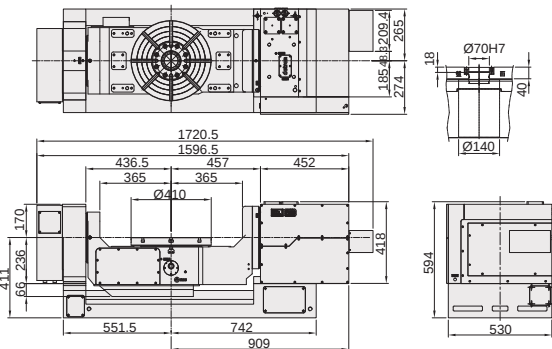
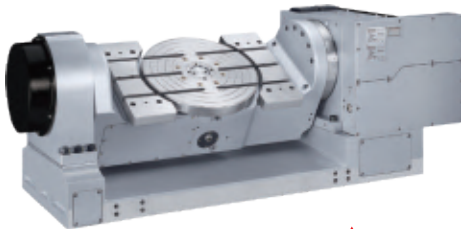
sub table as available option

GTFAE-320XBL(S)



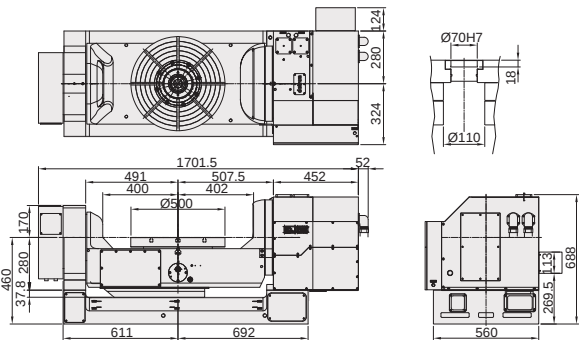
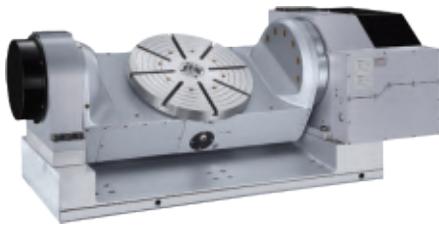
sub table as available option

GTFAE-410XBL(S)



sub table as available option

GTFAE-500XBL

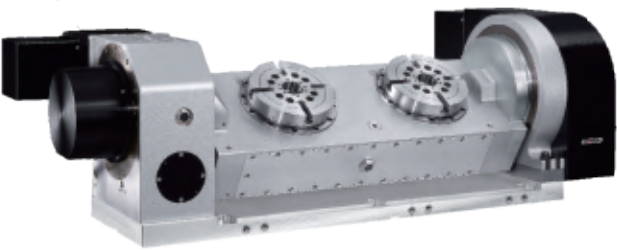
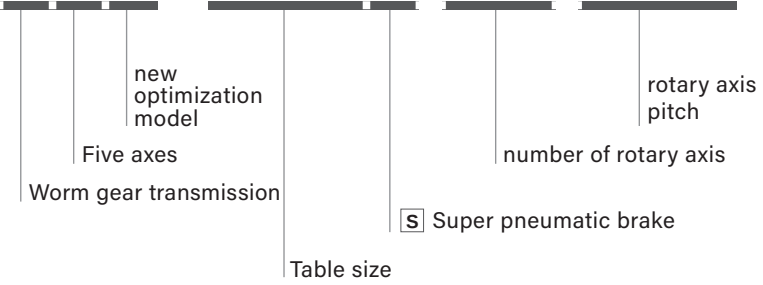


air-oil converter built-in

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



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

SPECIFICATIONS

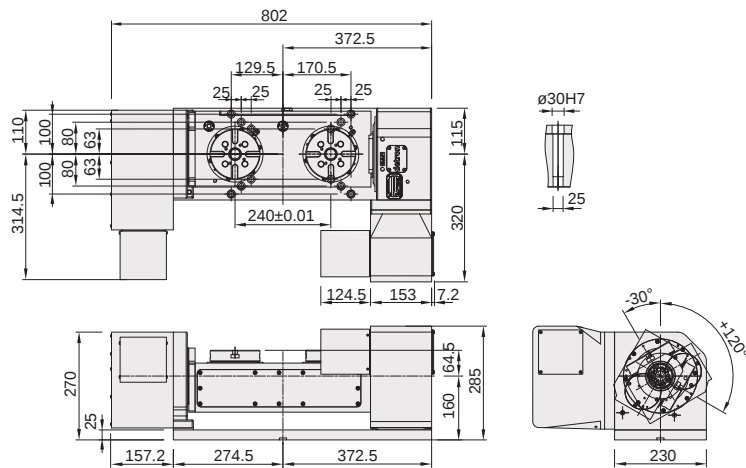
MODEL		Unit	GFA-125S-2W-240		GFA-170S-2W-300	
Worktable diameter		mm / inch	Ø125 / Ø4.92		Ø170 / Ø6.69	
Center bore diameter		mm / inch	Ø30H7 / Ø1.18H7		Ø40H7 / Ø1.57H7	
Pitch of rotary axis		mm / inch	240 / 9.45		300 / 11.81	
Max. work swing		mm / inch	195 / 7.68		285 / 11.22	
Height of table (horizontal)		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 74			
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 inertia	$(\frac{W.D^2}{8})$ 	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.

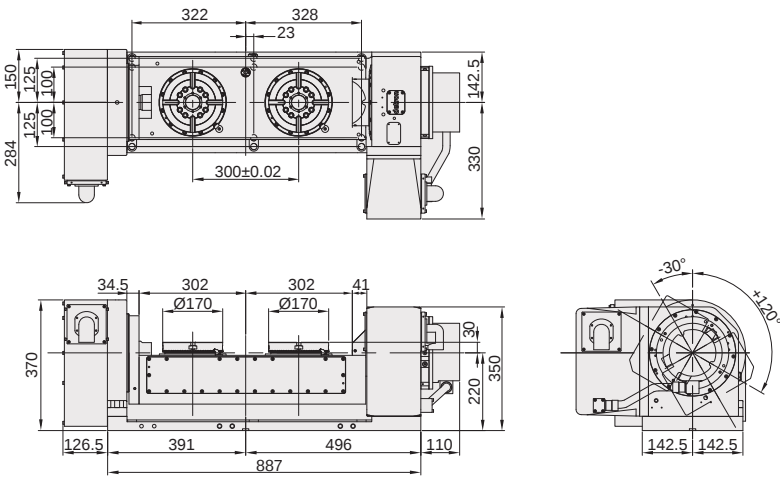
DIMENSIONAL DRAWINGS

Unit : mm

GFA-125S-2W-240



GFA-170S-2W-300

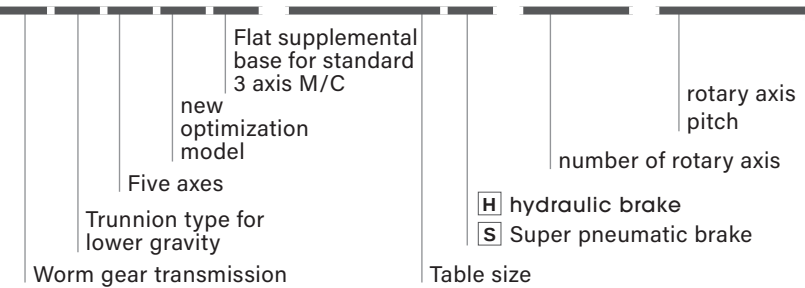


Note: 1. The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown at above are based on Fanuc motor)
2. Allowable wheel torque at table speed of 1 min⁻¹.
3. According to application engineering, optical encoder is recommended for tilting axis.

GTFAE-2W/3W series

Multi Spindle
Tilting Rotary Table

GTFAE-210S-2W-320



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

SPECIFICATIONS

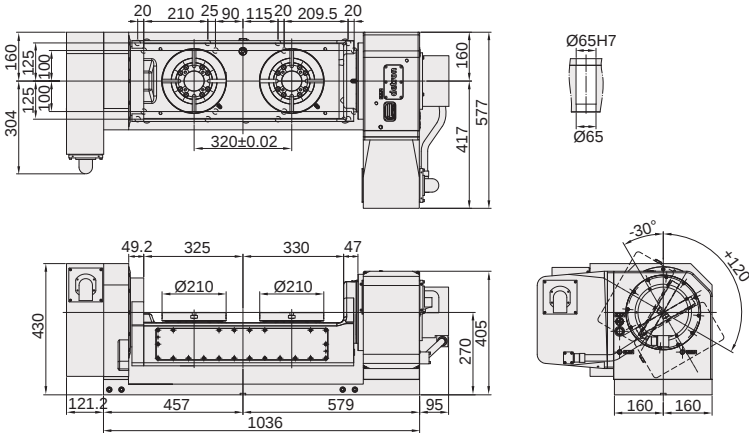
MODEL		Unit	GTFAE-210S-2W-320		GTFAE-255H-2W-400	
Worktable diameter		mm / inch	Ø210 / Ø8.27		Ø255 / Ø10.04	
Center bore diameter		mm / inch	Ø65H7 / Ø1.57H7		Ø50H7 / Ø1.57H7	
Pitch of rotary axis		mm / inch	320 / 12.60		400 / 15.75	
Max. work swing		mm / inch	310 / 12.20		390 / 15.35	
Height of table (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 74			
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	22.2 / 2000	20 / 2400
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	40 / 88		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 inertia	$\frac{W.D^2}{8}$ 	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	469 / 1034		975 / 2150	
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.

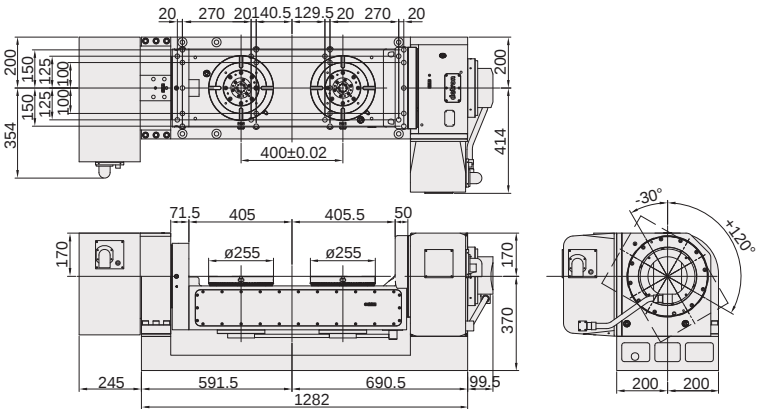
DIMENSIONAL DRAWINGS

Unit : mm

GTFAE-210S-2W-320

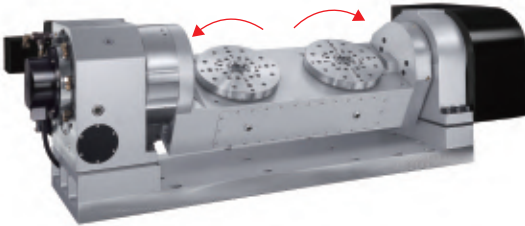


GTFAE-255H-2W-400



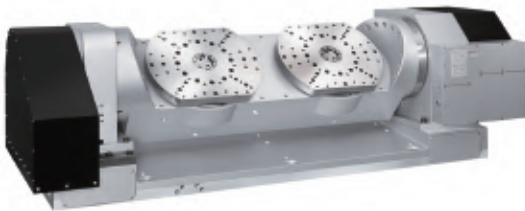
Hybrid Drive ▶▶▶

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.

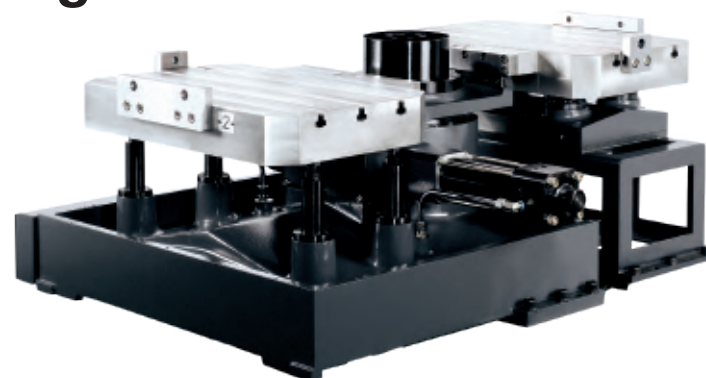
Note: 1. The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown at above are based on Fanuc motor)
2. Allowable wheel torque at table speed of 1 min⁻¹.
3. According to application engineering, optical encoder is recommended for tilting axis.

Automatic Pallet Change System

C V R - 6 6 0

Rack type	Pallet size
-----------	-------------

Double pallet system (C type)



- **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 $\pm 0.005\text{mm}$.

SPECIFICATIONS

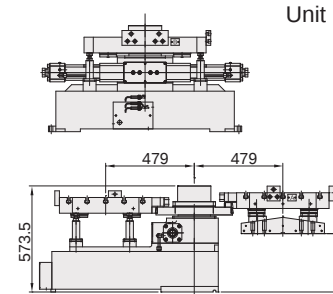
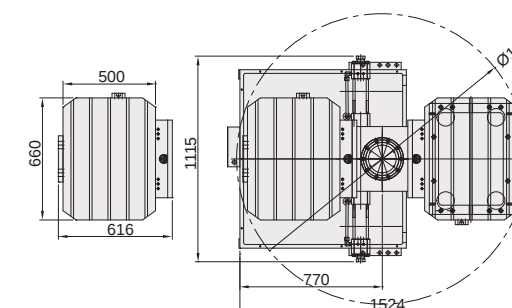
MODEL		Unit	CVR-660	CVR-850	CVR-10D
Pallet sizes		mm / inch	660 x 500 / 25.98 x 19.69	850 x 500 / 33.46 x 19.69	1000 x 500 / 39.37 x 19.69
Number of pallets			2	2	2
Pallet change method			180° Swing	180° Swing	180° Swing
T-slot size		mm / inch	14H8 / 0.55H8	18H8 / 0.71H8	18H8 / 0.71H8
Drive method /pressure		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.

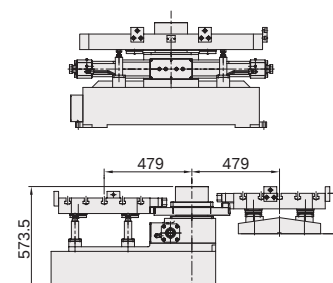
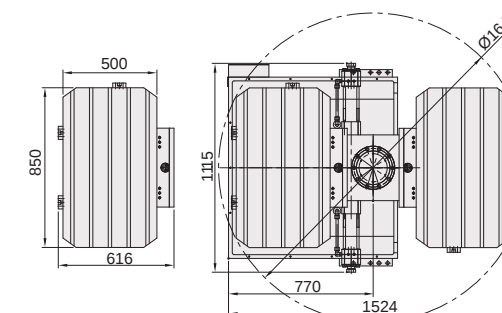
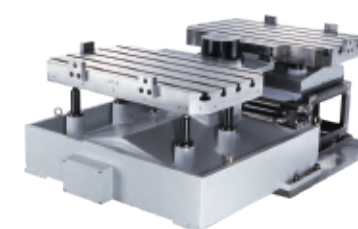
DIMENSIONAL DRAWINGS

Unit : mm

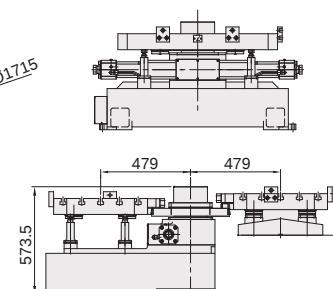
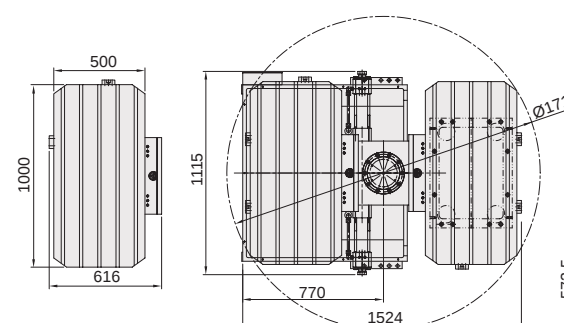
CVR-660



CVR-850



CVR-10D



SVC series

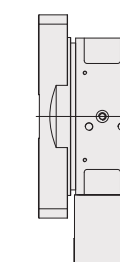
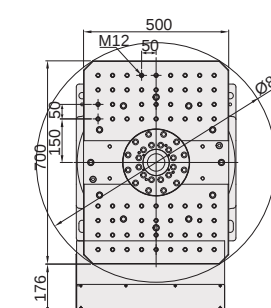
SVC - 7050 II

Roller gear
cam type

Pallet size

Single pallet system (Column moving type)

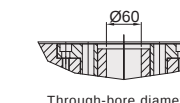
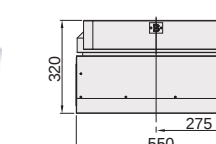
- Roller cam transmission perform backlash free without wear-out and stabilizes fast pallet change.
- Applied for machining center with column movable. Change cycle in 3.5 sec.
- Driven by servo motor with encoder for accurate positioning.



With flat structure

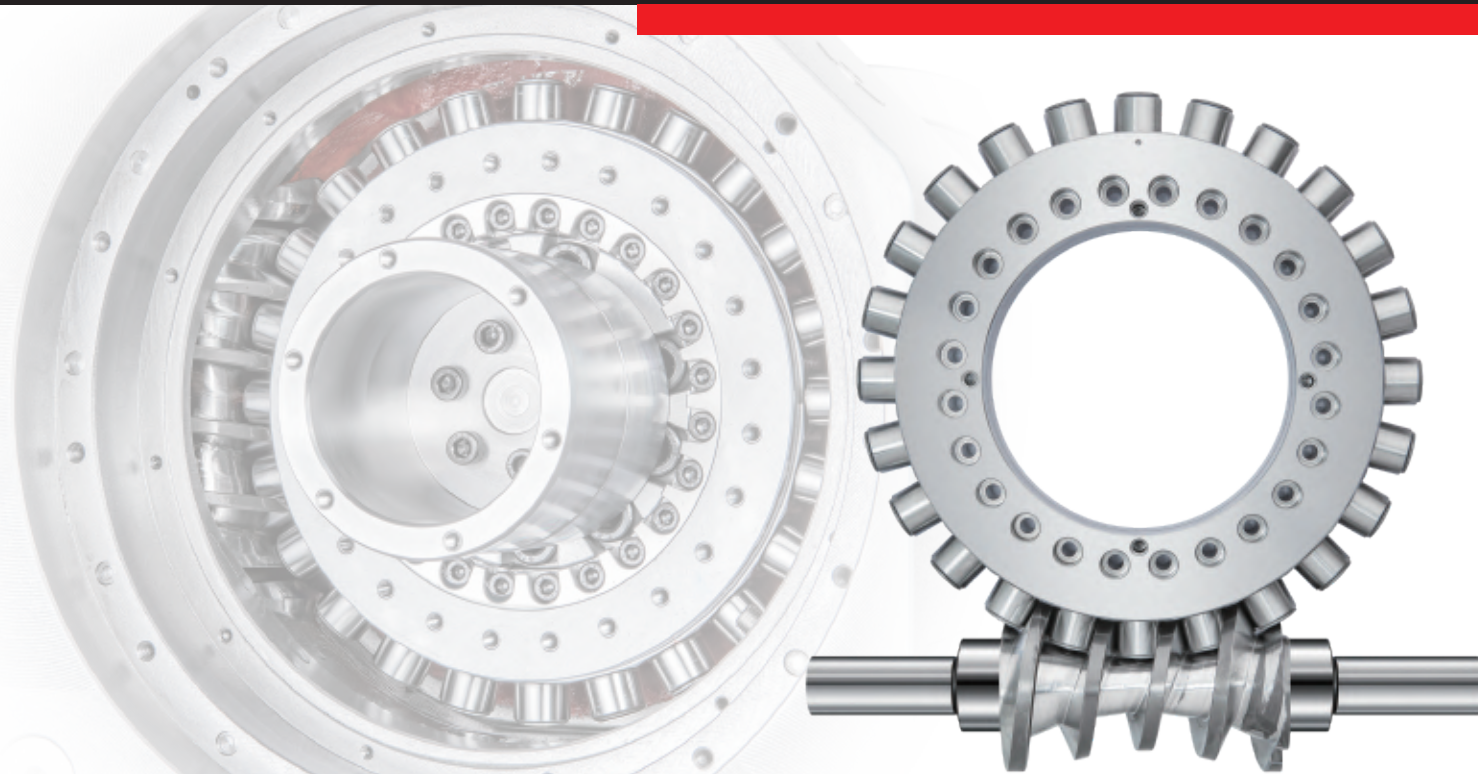
SVC-7050 II

SVC-10065 II

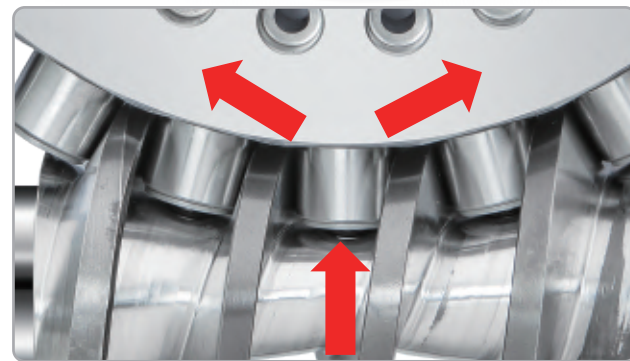


Zero-Backlash Roller Gear Cam Drive

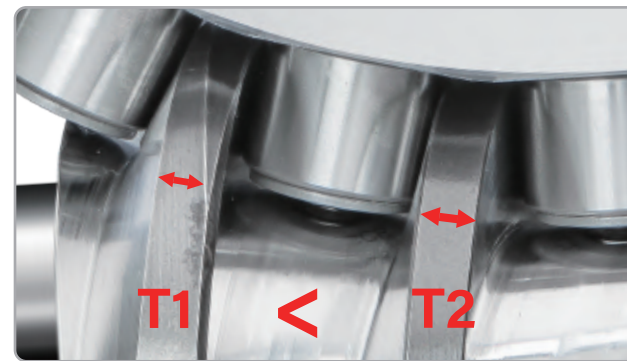
Core Technology



Dual Lead Cam Shaft Mechanism

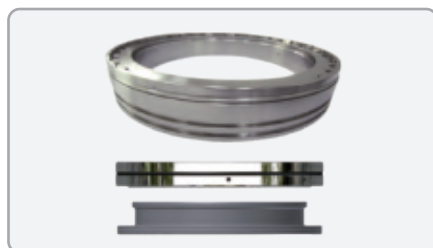


Preload adjustment can completely eliminate the engagement of roller and cam shaft to reach zero backlash and to ensure at least 4 rollers contacting cam shaft during rotation for high rigidity performance.



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



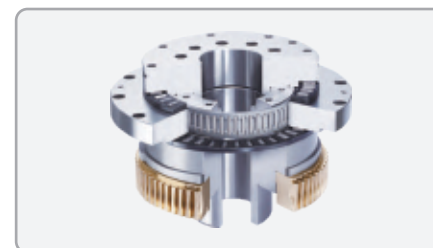
Hydraulic Model:

Special design of drum brake system.



Pneumatic Model:

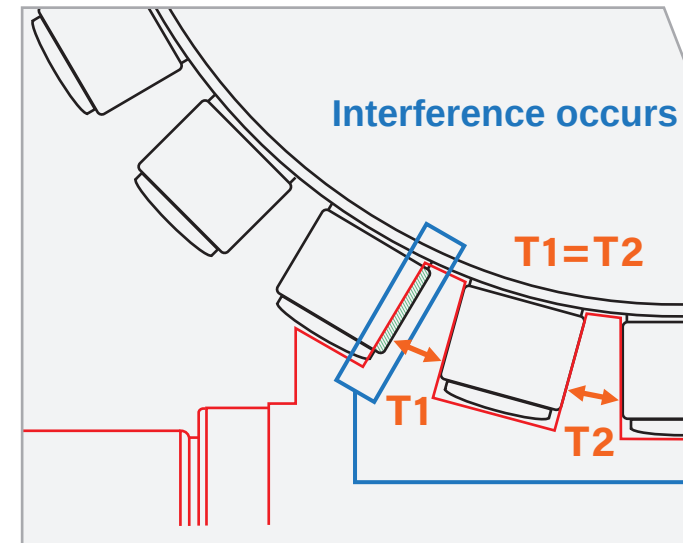
exclusive patented dual pistons design.



High Rigidity Consolidated Spindle

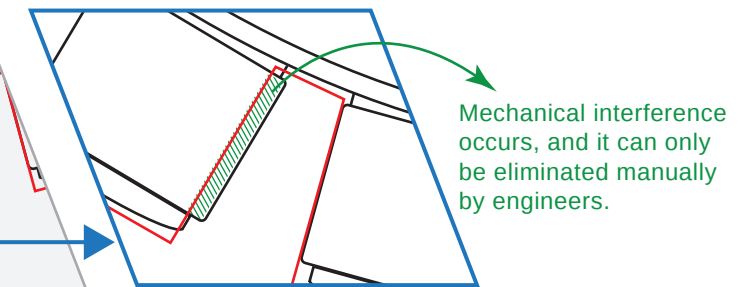
YRT bearing integrated in consolidated spindle with **least separate elements & premium rigidity.**

Dual Lead Cam Shaft Mechanism



◀ **Conventional Cam Shaft Design ($T1=T2$):**

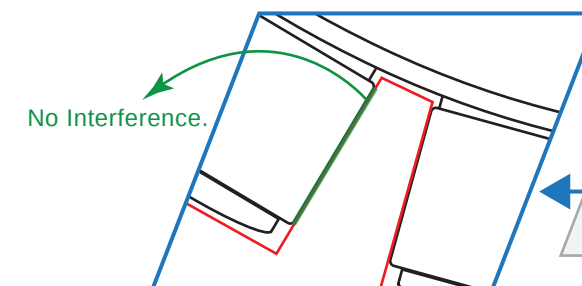
Conventional single-lead design relies heavily on engineers' assembling experiences and skills, this causes longer production time and unstable quality of processing accuracy and vibration issue.



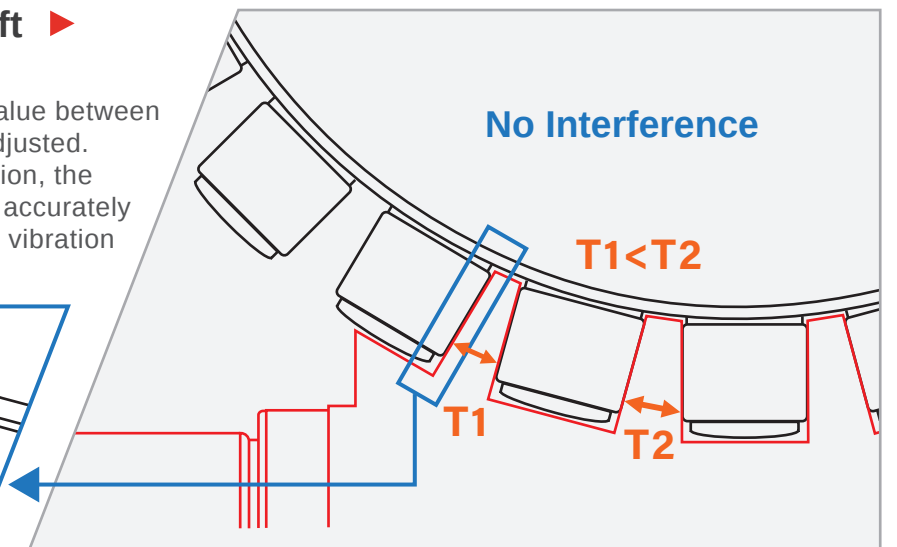
Mechanical interference occurs, and it can only be eliminated manually by engineers.

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.



No Interference.



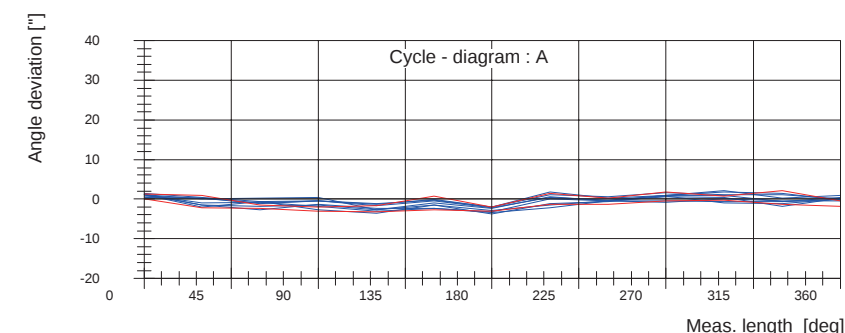
No Interference

$T1 < T2$

Strict Inspection Norm

detron

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

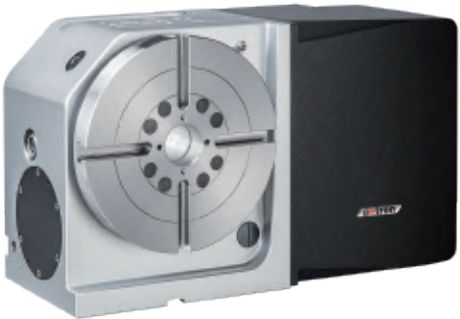
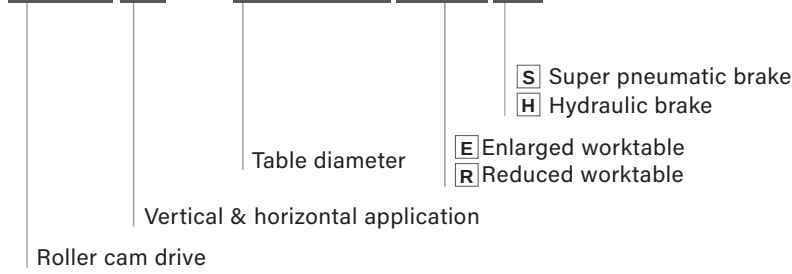


◀ Accuracy Inspection upon ISO 230-2 international norm is operated with 5 continuous runs in clockwise and counterclockwise test.

Roller Gear Cam Drive
Rotary Table

RCX-210S/H RCX-250ES/H
RCX-255H RCX-320H RCX-400H

RCX - 250 (E) S



- 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

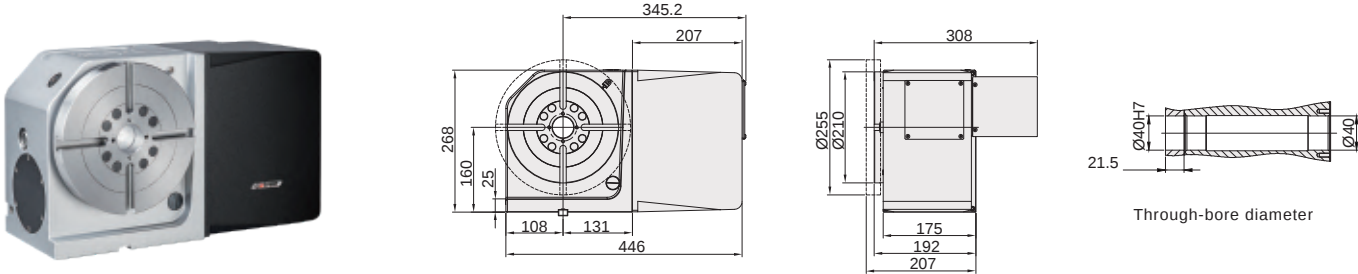
MODEL		Unit	RCX-210S/H RCX-250ES/H	RCX-255H	RCX-320H	RCX-400H
Worktable diameter	mm / inch		Ø210 / Ø8.27 Ø250 / Ø9.84	Ø255 / Ø10.04	Ø320 / Ø12.59	Ø400 / Ø15.75
Center bore diameter	mm / inch		Ø40H7 / Ø1.57H7	Ø140H7 / Ø5.51H7	Ø180H7 / Ø7.08H7	Ø220H7 / Ø8.66H7
Through-bore diameter	mm / inch		Ø40 / Ø1.57	Ø100 / Ø3.9	Ø140 / Ø5.5	Ø180 / Ø7.09
Height of table (horizontal)	mm / inch		192 / 7.6 207 / 8.15	216.5 / 8.5	235 / 9.25	255 / 10.04
Height of center (vertical)	mm / inch		160 / 6.30	190 / 7.49	210 / 8.26	255 / 10.04
Width of T-slot	mm / inch		12H7 / 0.47H7	12H7 / 0.47H7	14H7 / 0.55H7	14H7 / 0.55H7
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	Hydraulic 5 / 725	Hydraulic 5 / 725	Hydraulic 5 / 725
Clamping torque	N.m / ft. lbs.		400 / 295 600 / 443	1270 / 937	1600 / 1180	3000 / 2211
Servo motor spec			refer to page 73			
Transmission ratio			1 / 24	1 / 48	1 / 48	1 / 60
Max. table speed / at specified servo motor speed	min ⁻¹		83.3 / 2000	50 / 2400	50 / 2400	40 / 2400
Standard loading inertia ($\frac{W \cdot D^2}{8}$)	Kg.m ²		0.72	2.43	5.12	15
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		70 / 154 78 / 172	126 / 278	161 / 355	243 / 536
Allowable loading capacity	Vertical	kg / lb	100 / 220	150 / 331	200 / 440	250 / 550
	Horizontal	kg / lb	200 / 441	300 / 661	400 / 881	500 / 1100
	Tailstock applied	kg / lb	200 / 441	300 / 661	400 / 881	500 / 1100
FxL When table clamped		N / lbs	14000 / 3147	20000 / 4496	28000 / 6294	38000 / 8527.20
		N.m / ft. lbs.	1020 / 752	1700 / 1254	3000 / 2212	5400 / 3983
		N.m / ft. lbs.	400 / 295 600 / 443	1270 / 937	1600 / 1180	3000 / 2212
Cam allowable torque	N.m / ft. lbs.		280 / 207	800 / 590	1098 / 809	1772 / 1307
Allowable Max. rotary joint quantity	Port		4	6	6	6

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

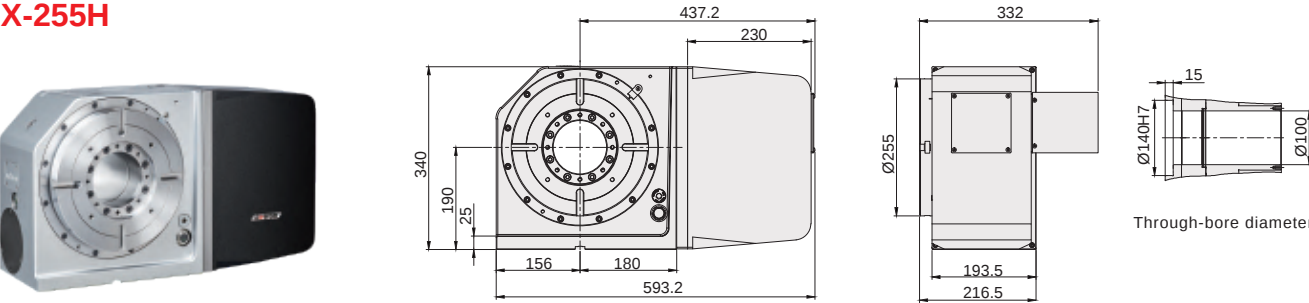
DIMENSIONAL DRAWINGS

RCX-210S/H Worktable can be enlarged to Ø250 (RCX250ES/H)

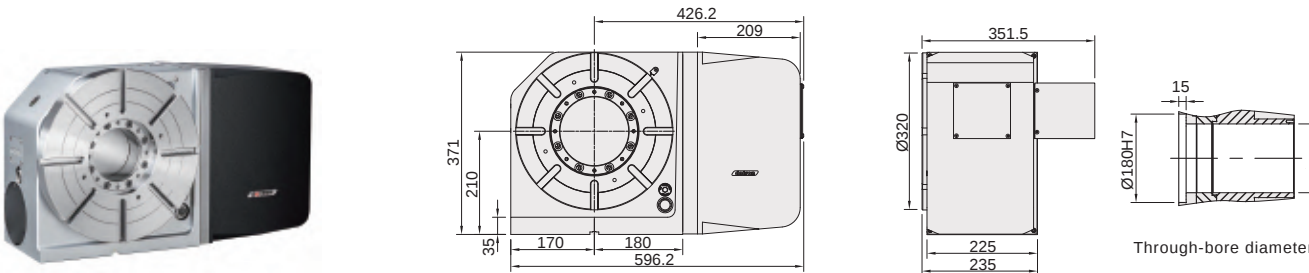
Unit : mm



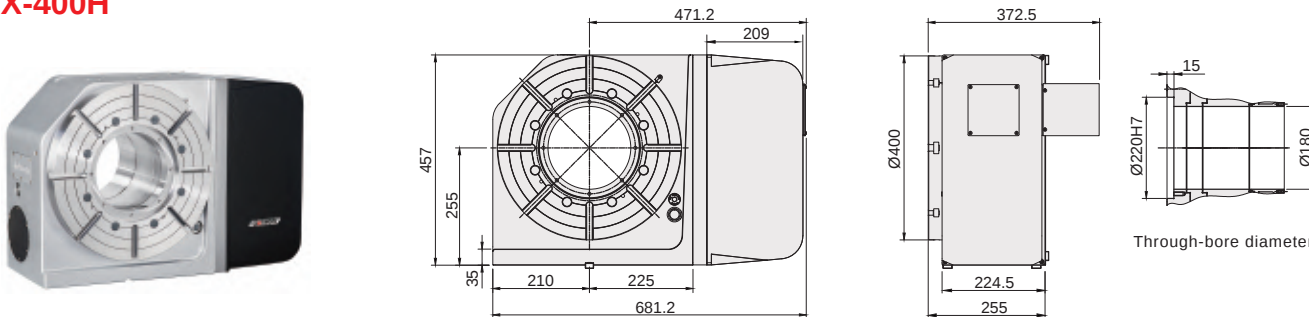
RCX-255H



RCX-320H



RCX-400H



Roller Gear Cam Drive
Tilting Rotary Table

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

RCF - 320H

S Super pneumatic brake
H Hydraulic brake

Five axis

Roller cam drive

Table diameter



- 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.

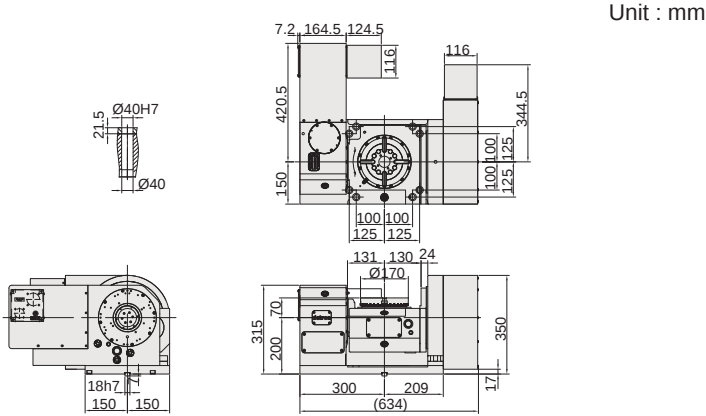
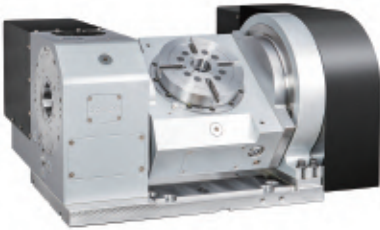
SPECIFICATIONS

MODEL		Unit	RCF-170S/H		RCF-210S/H		RCF-255H		RCF-320H		
Worktable diameter		mm / inch	Ø170 / Ø6.69		Ø210 / Ø8.27		Ø255 / Ø10.04		Ø320 / Ø12.59		
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 / 13.18		355 / 13.97		
Height of center (vertical)		mm / inch	200 / 7.87		210 / 8.27		235 / 9.25		255 / 10.03		
Width of T-slot		mm / inch	12H7 / 0.47H7		12H7 / 0.47H7		12H7 / 0.47H7		14H7 / 0.55H7		
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 74								
Transmission ratio			R	T	R	T	R	T	R	T	
			1:60	1:90	1:60	1:90	1:60	1:90	1:60	1:48	
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 / 2664	33.3 / 1600	
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		200 / 440		
	In Tilting (0~90°) 	kg / lb	50 / 110		70 / 154		90 / 198		150 / 330		
Allowable unbalancing work moment	WxL 	N.m / ft. lbs.	40 / 29.5		62 / 45.7		92 / 67.8		130 / 95.8		
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		1600 / 1180		
Standard loading inertia ($\frac{W.D^2}{8}$) 		kg.m ²	0.2		0.4		0.94		2.6		
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		355 / 782		488(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		

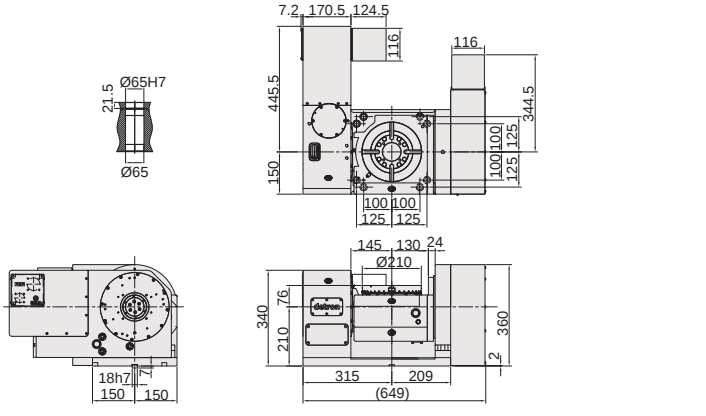
Note: 1. R: Rotary Axis T: Tilt Axis
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

DIMENSIONAL DRAWINGS

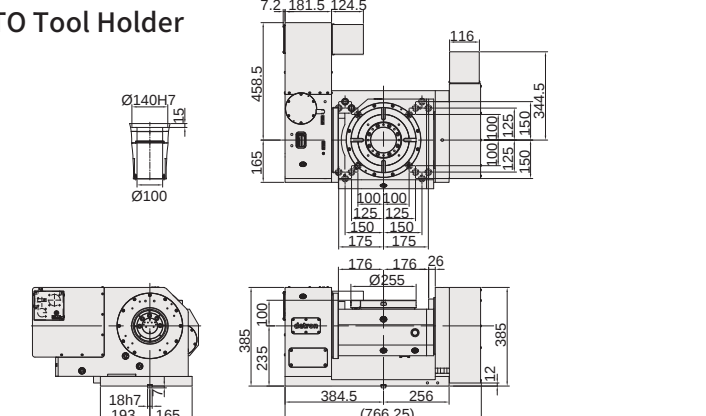
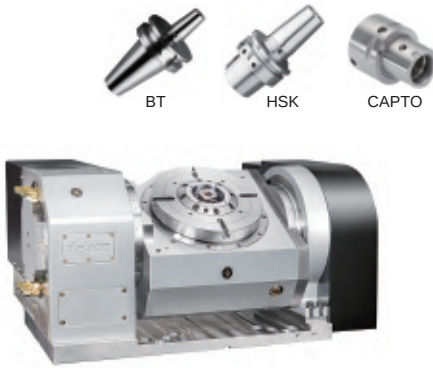
RCF-170S/H



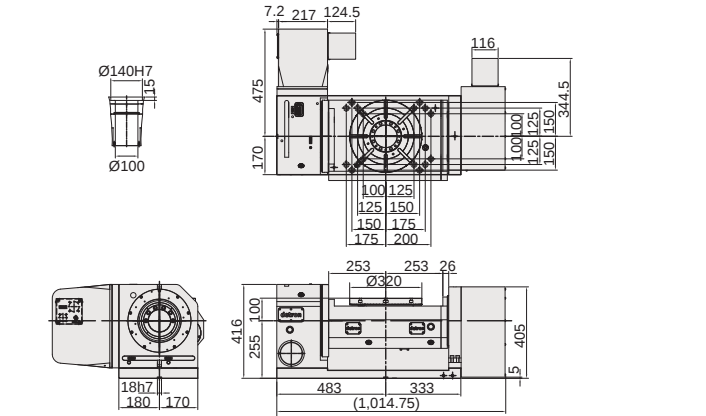
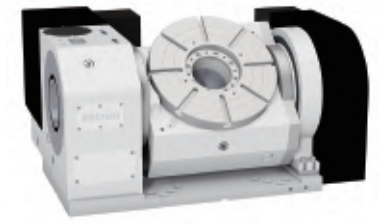
RCF-210S/H



RCF-255H Optional Interface For BT / HSK / CAPTO Tool Holder



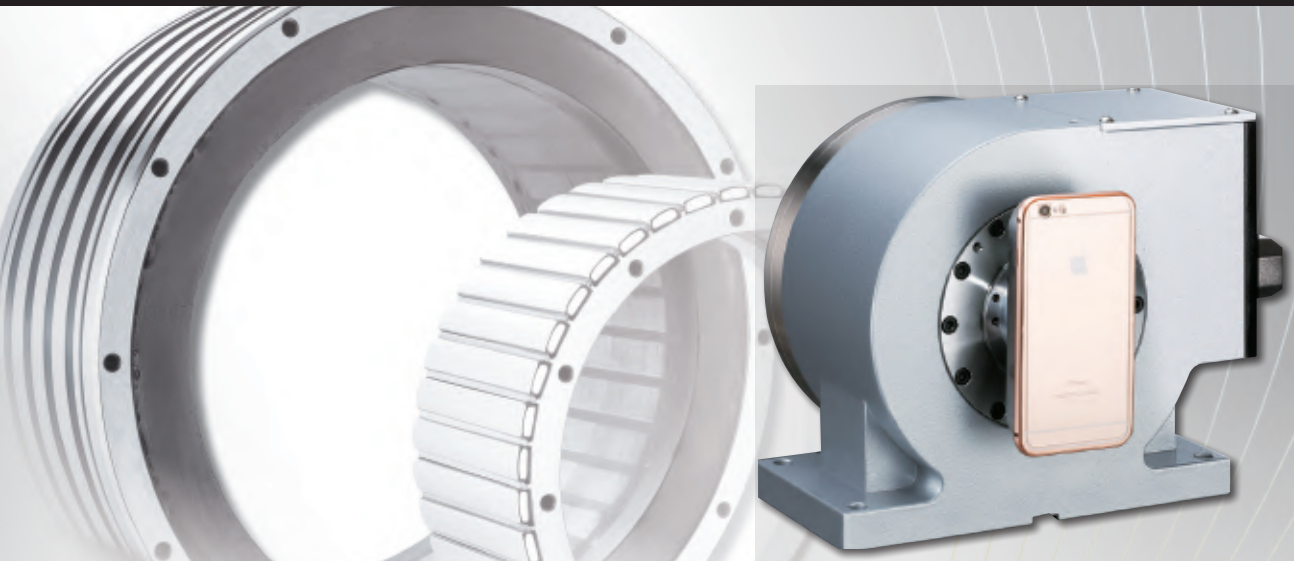
RCF-320H



Unit : mm

Core Technology – Built- in Torque Motor for Direct Drive

Core Technology – High Speed and Precision



Higher Speed and Torque Performance

Table Ø 170mm model as example

detron

Torque at Peak	201.5 N-m	↑
Rated Continuous Torque	60 N-m	↑
Continuous Power Output	0.968 KW	↑
Max Speed	250	↑

others

Torque at Peak	184 N-m	↓
Rated Continuous Torque	46 N-m	↓
Continuous Power Output	0.75 KW	↓
Max Speed	200	↓

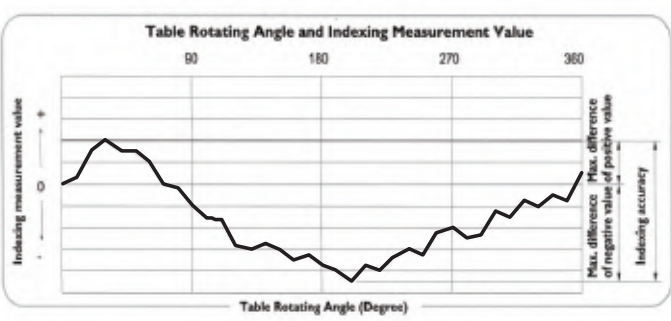
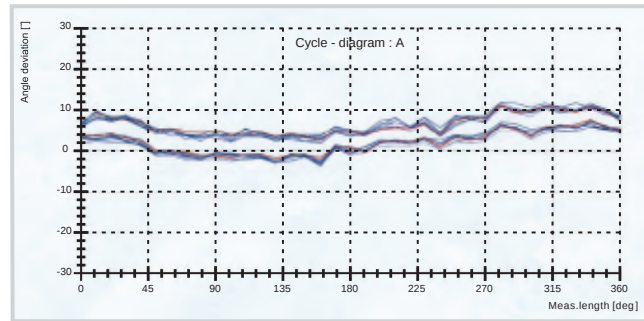
Strict Inspection Norm

detron

ISO 230-2 (JIS B6192)

others

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



others

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

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



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.

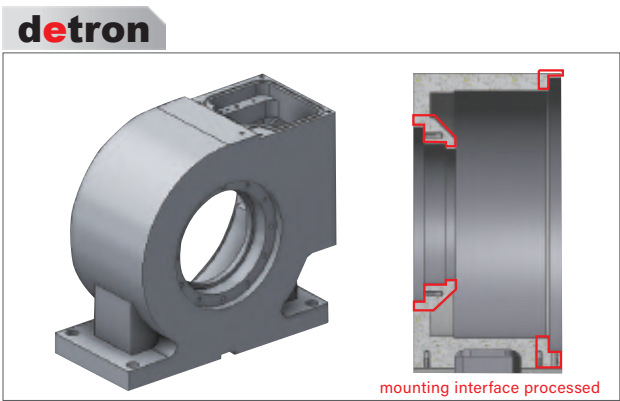


Environmental

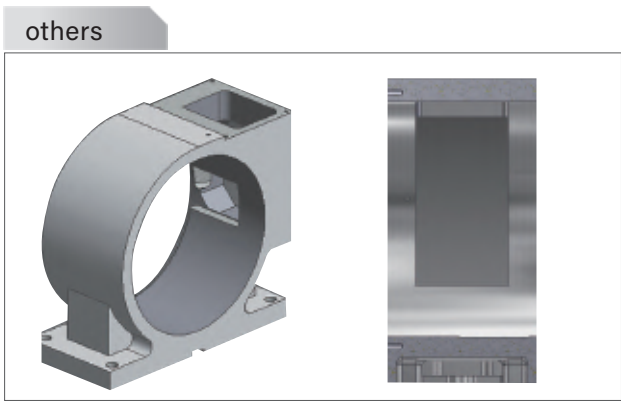
- Noise- reducing, easy maintenance, free from oil waste.
- Compact structure for flexible working envelope.

Core Technology – High Rigidity

Main Cartridge Structure

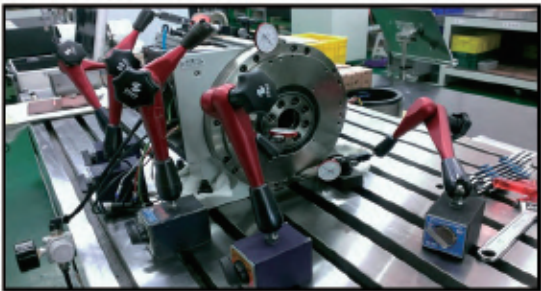


- Consolidated main cartridge with spindle mounting interface reserved.
- Least isolated components, accumulated error reduced.
- Excellent rigidity dynamic balance while high speed operation, low inertia and run-out concern.
- Closer distance between optical encoder and bearing for higher positioning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

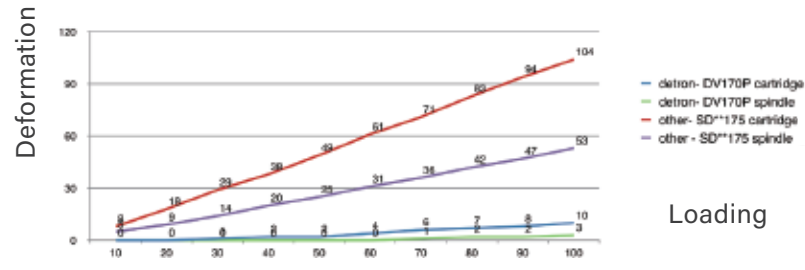


- Weak and hollow cartridge without mounting interface reserved. Spindle is installed by isolated flanges.
- Isolated parts caused more accumulated errors.
- Instable rigidity and deformation, mass inertia, low loading capability. Not recommended for high speed processing.
- Longer distance between encoder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

practical test



Rigidity Experiment Analysis

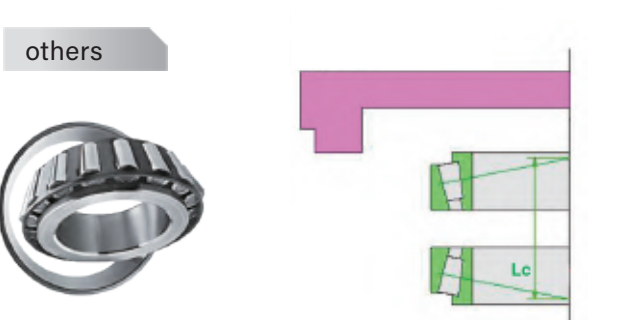


Spindle Bearing



Cross Roller Bearing moment L_b is longer than L_c , better loading performance.

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



Taper Roller Bearing moment L_c is shorter than L_b , lower loading capacity.

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

Guarantee for Thorough Protection

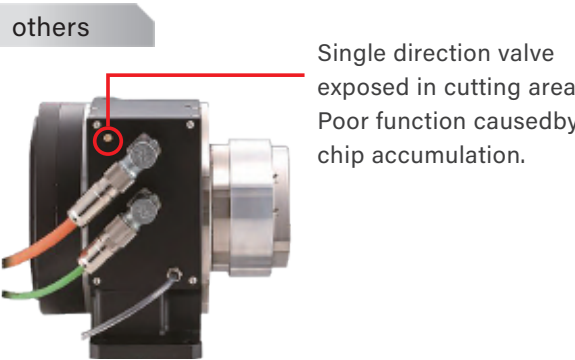
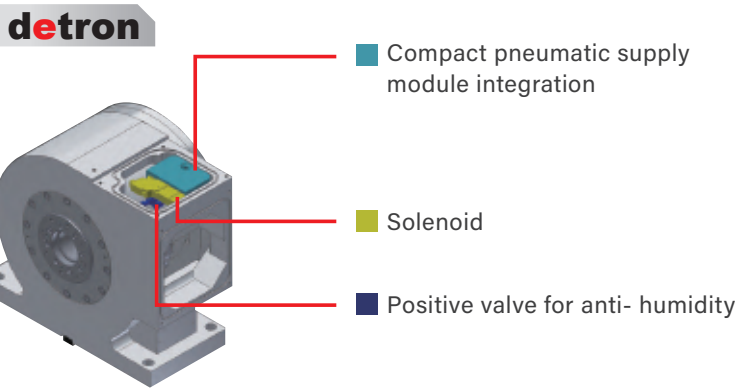
Chip and Water Proof



- 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.

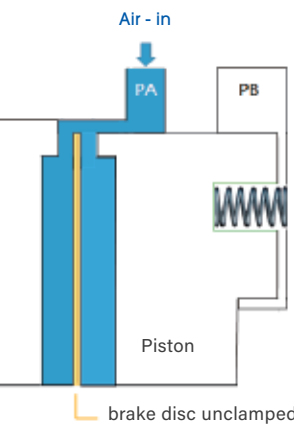


- Cables terminated in low cost plug connectors. Isolated electronic and pneumatic pipelines are randomly arranged.
- Poor pipe material. Erosion and chip cut concern on nylon pipes. High risk by frequent break-down.

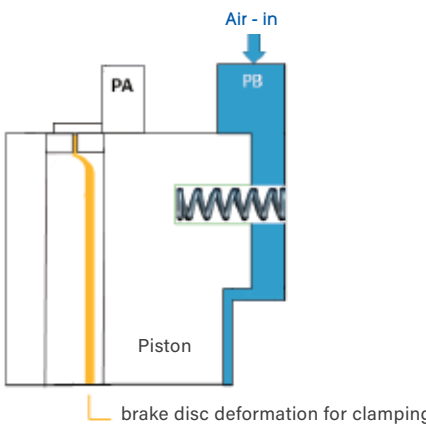


Brake in Various Condition

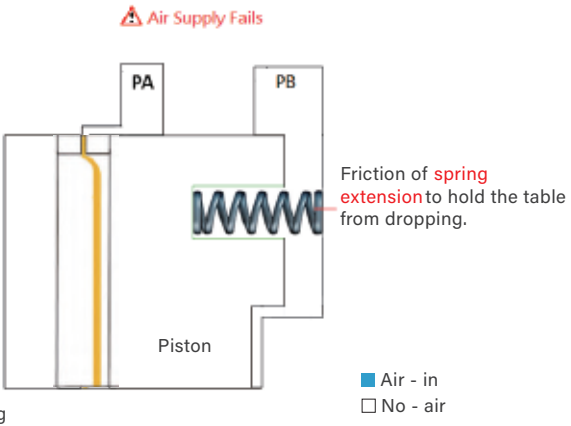
• Table in Operation



• Table Positions



• Power Failure



DDM Rotary Table

D V - 1 7 0 P

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



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

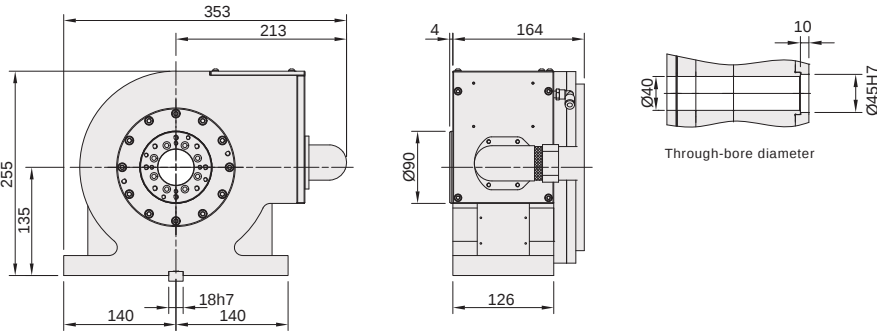
MODEL		Unit	DV-170P	DV-255P II
Worktable diameter		mm / inch	STD : No table OPT : Ø170 / Ø6.69	STD : No table OPT : Ø255 / Ø10.04
Center bore diameter (worktable)		mm / inch	OPT : Ø40H7 / Ø1.57H7	OPT : Ø50H7 / Ø1.96H7
Through-bore diameter		mm / inch	Ø40 / Ø1.57	Ø40 / Ø1.57
Height of center (vertical)		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		N / lbs	12700 / 2849.88	14000 / 3141.6
		N.m / ft. lbs.	740 / 540.2	1020 / 751.74
		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.

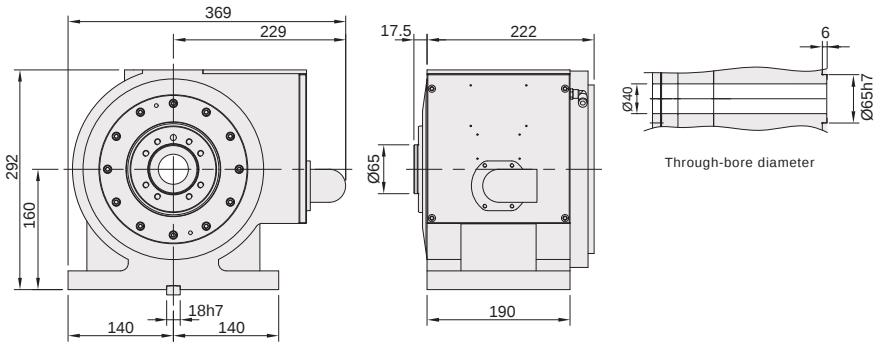
DIMENSIONAL DRAWINGS

Unit : mm

DV-170P



DV-255P II



Application Example



▲ 90° degree dividers



▲ Customized interface of quick change mold , EROWA as example

for VMC_DDM series

DDM Trunnion
Tilting Rotary Table

DTFS - 170P

S

Single support
Flat

E

Supplemental
Base for standard
3 axis M/C

P

Pneumatic

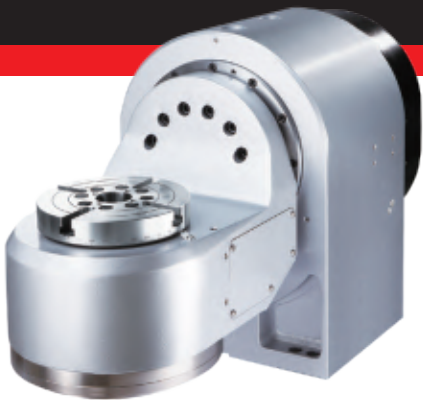
H

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.

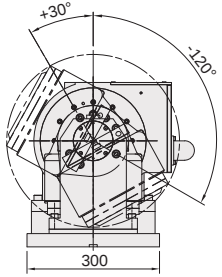
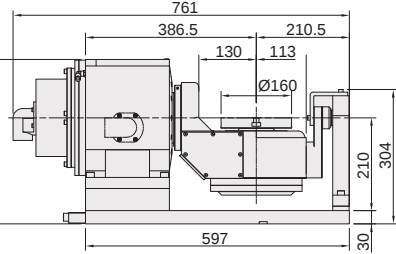
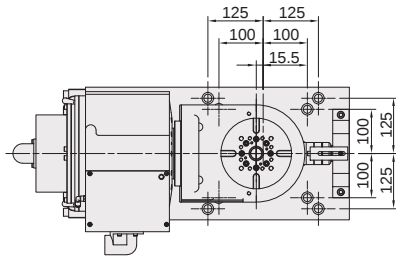
SPECIFICATIONS

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 loading 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		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.

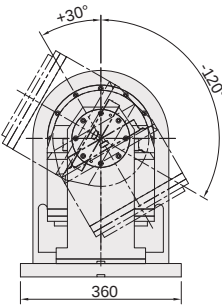
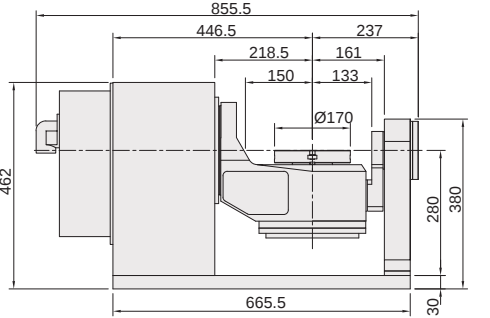
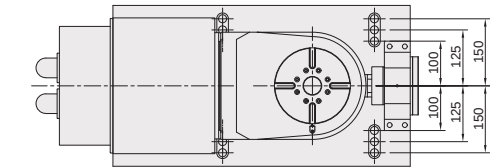
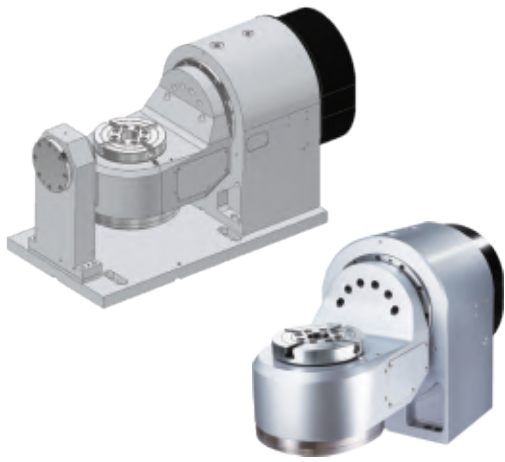
DIMENSIONAL DRAWINGS

DTFE-125P with base plate



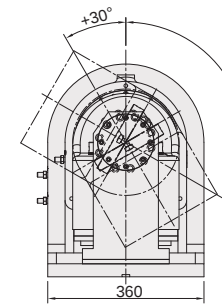
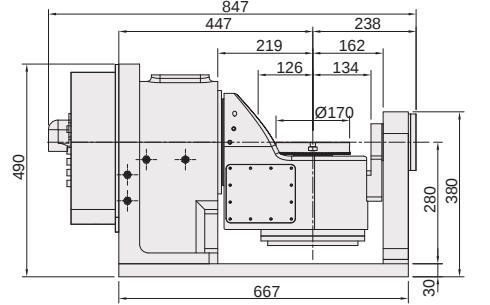
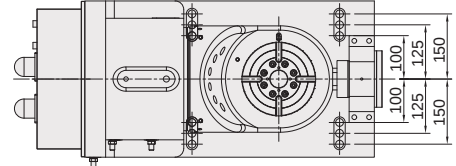
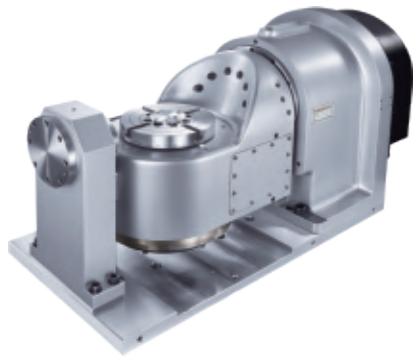
DTFS-125P with compact single support

DTFE-170P with base plate



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

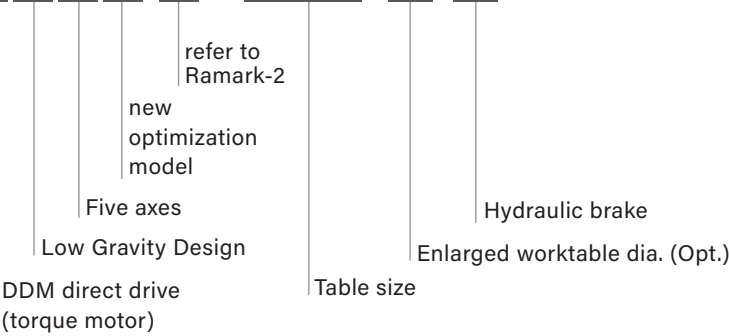
DTFE-171P



for VMC_DDM series

DDM Trunnion
Tilting Rotary Table

DTFA(I) - 650(E)H



▲ 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	DTFAI-650H / DTFAI-720EH	D2TF-800H
Worktable diameter	mm / inch	Ø650 / Ø25.59 / Ø720 / Ø28.34	Ø800
Center bore diameter	mm / inch	Ø70H7 / Ø2.76H7	Ø65H7
Height of table	mm / inch	250 / 9.84	225
Width of T-slot	mm / inch	18H7 / 0.71H7	14H7
Width of guide block	mm / inch	-	-

Clamping method / pressure	MPa / psi	hydraulic 4 / 580	hydraulic 4 / 580
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Max. table speed	min ⁻¹	R	T	R	T
		100	50	100	50
Clamping torque	N.m / ft. lbs.	2500 / 1843.91	4500 / 3319.03	3000	6000
Allowable loading capacity	In Horizontal	kg / lb	300 / 661.39	1000	
	In Tilting (0~90°)	kg / lb	300 / 661.39	1000	
Allowable unbalancing work moment	WxL	N.m / ft. lbs.	300 / 221.27	800	
	F	N / lbs	40000 / 8992.36	50000	
FxL When table clamped	FxL	N.m / ft. lbs.	2500 / 1843.91	3000	
	FxL	N.m / ft. lbs.	4500 / 3319.03	6000	
Allowable loading inertia	(W.D ² / 8)	kg.m ²	9.4	20	
Resolution	deg.	0.001	0.001		
Indexing accuracy	sec	10	20	10	20
Repeatability	sec	4	4	4	4
Tilting angle range	deg.	+110 ~ -110	-120 ~ +30		
Net weight (motor incl.)	kg / lb	1450 / 3196.7 / 1500 / 3306.9	2500		
Cooling system		Oil cooling	油冷式(與機床共用冷卻)		

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

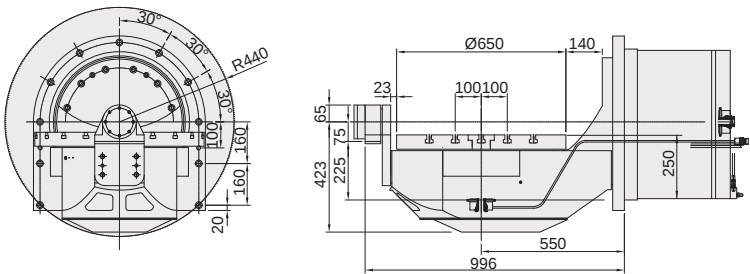
Unit : mm

DTFAI-650H

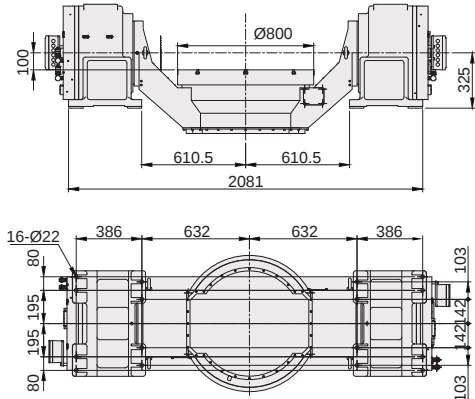


Machine base supplied by buyer

▲ DTFAI-720EH



D2TF-800H



Tilting Rotary Table For Turning and Milling Machine ▶▶▶

G2DTF-630H(S)

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



Rotary Axis - DDM (800rpm)
Tilting Axis - Tandem drive by spur gear and worm gear

RC2DTF-410HS



Rotary Axis - DDM (1200rpm)
Tilting Axis - Tandem drive by spur gear and worm gear

DTF-280P



Machine base supplied by buyer

Rotary Axis – DDM (1500rpm)
Tilting Axis – DDM (150rpm)

DTF-410H



Rotary Axis – DDM (100rpm)
Tilting Axis – DDM (60rpm)

NC Integration for Detron DDM series

DDM Rotary Table

Compatible System & Spec.	detron DD 4th Axis Rotary Table	
	DV-170P	DV-255PII
Cooling System	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
	Remark	α iSV80: New: A06B-6240-H125 Old : A06B-6117-H105 β iSV80: New: A06B-6160-H004 Old : A06B-6130-H004 Purchase software "Pole Position Detection Function" from NC service center: Oi-MC: A02B-0310-S744 Oi-MD: A02B-0320-S744 Oi-MF: A02B-0340-S744 31i-B5: A02B-0326-S744
Mitsubishi System	Driver	New: MDS-EJ-V1-30 Old : MDS-DJ-V1-30
	Remark	New: MDS-EJ-V1-40 Old : MDS-DJ-V1-40
Siemens System	Driver	With Internal Cooling: 6SL3120-1TE15-0AA4 Compact Type: 6SL3420-1TE15-0AA1
	Remark	With Internal Cooling: 6SL3120-1TE21-0AA4 Compact Type: 6SL3420-1TE21-0AA1 - Purchase Siemens "SMC40" module while applying Heidenhain encoder. - Purchase Renishaw "A-977-0575" signal transferrer while applying Renishaw encoder.
Heidenhain System	Driver	UM111D
	Remark	UM111D - Compatible with Heideihain Optical Scale Only

DDM Trunnion Tilting Rotary Table

Compatible System & Spec.	detron DD 5th Axis Rotary Table ø125mm	
	DTFS125P / DTFE125P	
Axis	Tilting Axis	Rotary Axis
Cooling System	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
	Remark	α iSV40: New: A06B-6240-H124 Old : A06B-6117-H104 β iSV40: New: A06B-6160-H003 Old : A06B-6130-H003 Purchase software "Pole Position Detection Function" from NC service center: Oi-MC: A02B-0310-S744 Oi-MD: A02B-0320-S744 Oi-MF: A02B-0340-S744 31i-B5: A02B-0326-S744
Mitsubishi System	Driver	New: MDS-EJ-V1-40 Old : MDS-DJ-V1-40
	Remark	New: MDS-EJ-V1-40 Old : MDS-DJ-V1-40
Siemens System	Driver	With Internal Cooling: 6SL3120-1TE21-0AD0 Compact Type: 6SL3420-1TE21-0AA1
	Remark	With Internal Cooling: 6SL3120-1TE21-0AD0 Compact Type: 6SL3420-1TE21-0AA1 - Purchase Siemens "SMC40" module while applying Heidenhain encoder. - Purchase Renishaw "A-977-0575" signal transferrer while applying Renishaw encoder.
Heidenhain System	Driver	UM111D
	Remark	UM111D - Compatible with Heideihain Optical Scale Only

DDM Trunnion Tilting Rotary Table

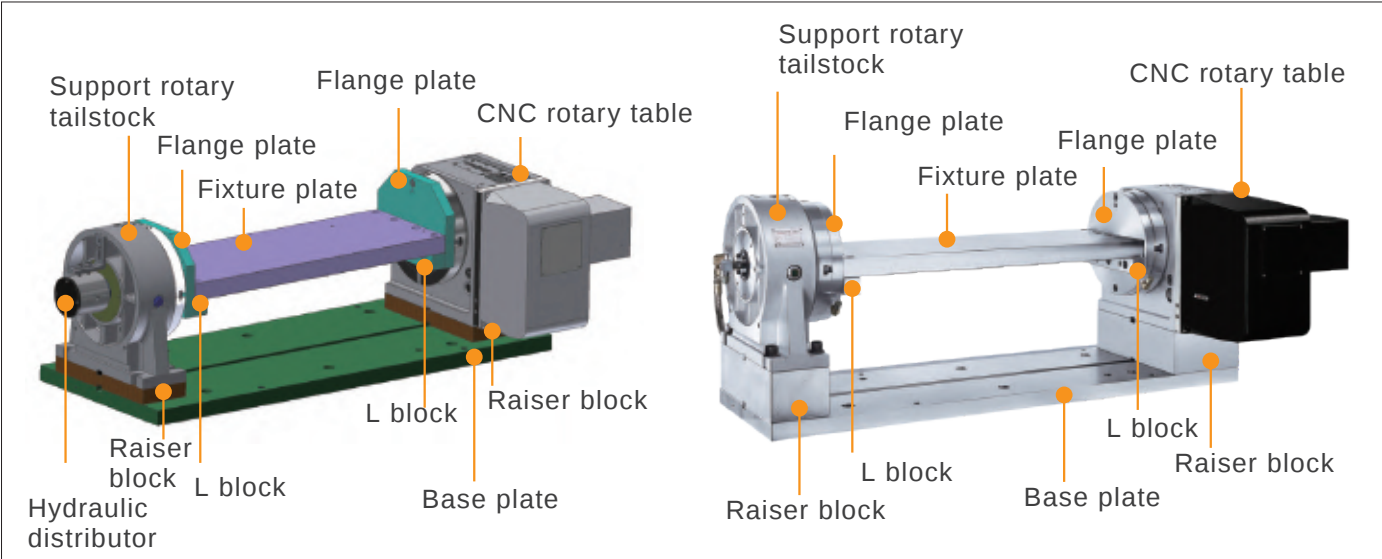
Compatible System & Spec.		detron DD 5th Axis Rotary Table ø170mm			
		DTFS170P / DTFE170P		DTFE171P	
Axis		Tilting Axis	Rotary Axis	Tilting Axis	Rotary Axis
Cooling System		Air Cooling	Air Cooling	Oil Cooling	Oil Cooling
Optical Scale		Renishaw or Heideihain			
NC parameter		Exclusive tech of detron			
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: Oi-MC: A02B-0310-S744 Oi-MD: A02B-0320-S744 Oi-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

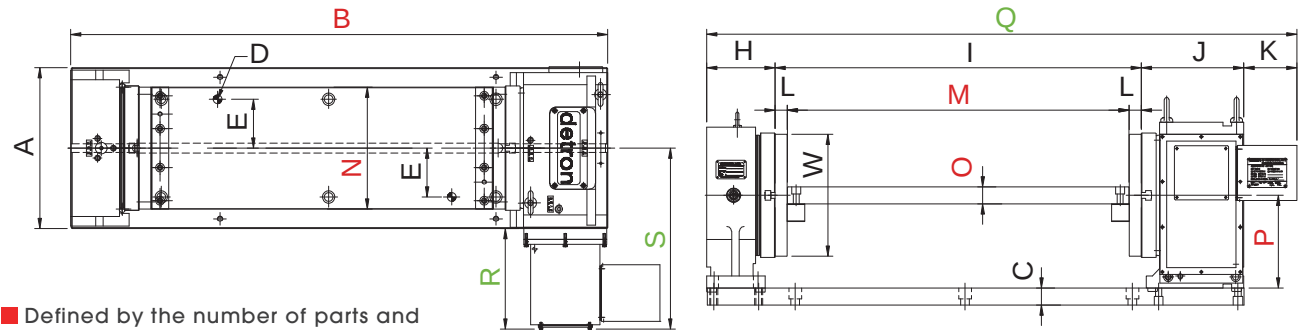
Compatible System & Spec.		detron DD 5th Axis Rotary Table ø280 mm & ø650 mm			
		DTF-280P		DTFAI-650H	
Axis		Tilting Axis	Rotary Axis	Tilting Axis	Rotary Axis
Cooling System		Oil Cooling	Oil Cooling	Oil Cooling	Oil Cooling
Optical Scale		Renishaw or Heideihain			
NC parameter		Exclusive tech of detron			
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: Oi-MC: A02B-0310-S744 Oi-MD: A02B-0320-S744 Oi-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

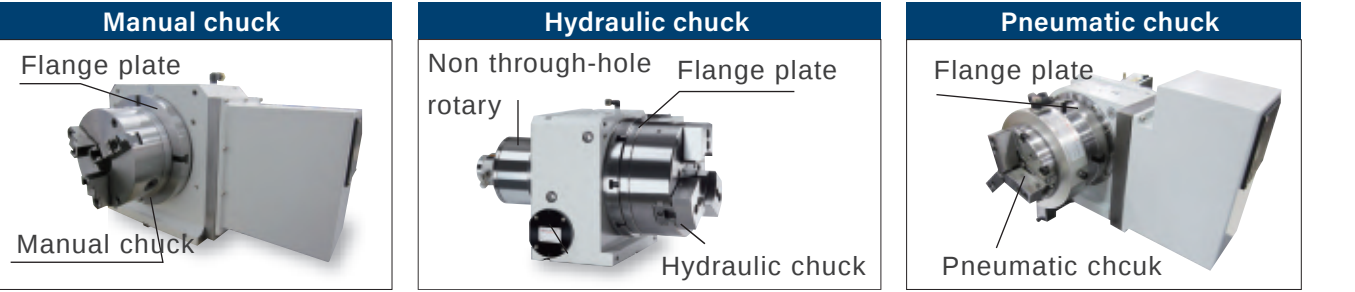


- Defined by the number of parts and work pieces
- Attention to machine interference

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



ROTARY TABLE AND COMPATIBLE CHUCK

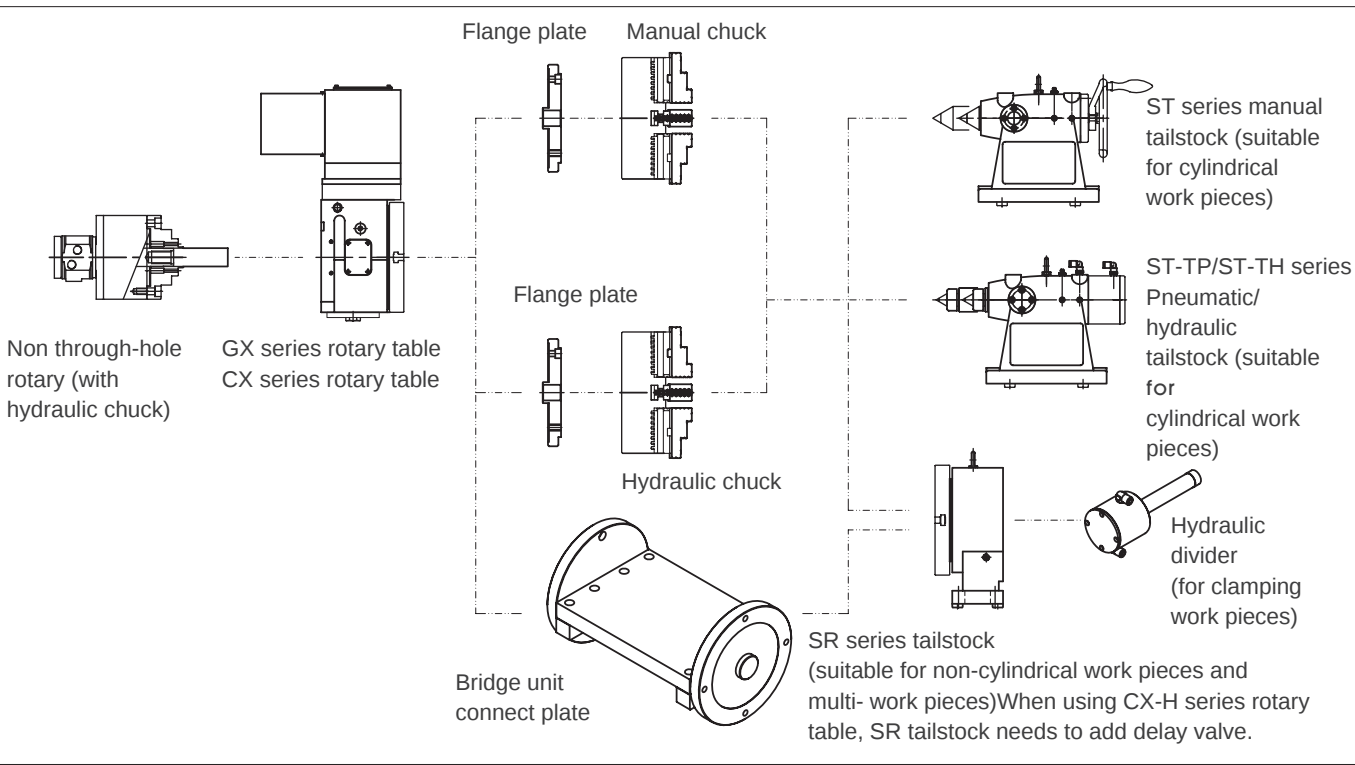
MODEL	GXA-125S	GXA-170S	GXA-210S	GXA-255H	GXA-320H	GXA-400H	GX-500H
Manual chuck	SC-4", SC-5"	SK-6", SK-7"	SK-7", SK-8"	SK-8", SK-9"	SK-10", SK-12"	SK-10", SK-12"	SK-12", SK-16"
Hydraulic chuck		HCK-6"	HCK-6"	HCK-8"	HCK-10"		

*Model in red is suggested

GRIPPING RANGE OF 3- JAW CHUCK

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	Ø1.26-3.31	Ø1.38-3.94	Ø2.17-5.91	Ø2.44-6.69	Ø2.67-7.08	Ø2.76-8.27	Ø3.15-9.84	Ø3.54-11.42	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.

4th Axis Compatible Servo Motors

Worm Gear Type Models

CNC and Servo System						
Model	FANUC	MITSUBISHI	YASKAWA	SIEMENS	HEIDENHAIN	FAGOR
GXA-125S	αiF2	HG-75	SGM7J08A	1FK2204-6AF	QSY-96A	FKM22.30A
	βis4			1FK2205-2AF		
GXA-170S(L)/H GV-170SB	αiF4	HG-54	SGM7G09A	1FK2205-4AF	QSY-116C	FKM42.30A
	βis8			1FK2206-2AF		
GXA-170S-2W-250	αiF8 / βis8	HG-104	SGM7G09A	1FK2206-2AF	QSY-116C	FKM42.30A
GXA-210S(L)/H GVA-210SB	αiF4	HG-104	SGM7G09A	1FK2205-4AF	QSY-116C	FKM42.30A
	βis8			1FK2206-2AF		
GXA-250S/H	αiF4	HG-104	SGM7G09A	1FK2205-4AF	QSY116C	FKM42.30A
	βis8			1FK2206-2AF		
GXA-255H(L) CX-255H	αiF4 / αiF8	HG-104 HG-154	SGM7G13A	1FK2206-4AF	QSY-116E	FKM44.30A
	βis8					
GVA-255HBII	αiF8	HG-154	SGM7G13A	1FK2206-4AF	QSY-116E	FKM44.30A
	βis12					
GXA-320H CX-320H	αiF8 / αiF12	HG-204	SGM7G30A	1FK2208-3AC	QSY-155B	FKM64.30A
	βis22					
GXA-400H CX-400H	αiF12	HG-204	SGM7G30A	1FK2208-3AC	QSY-155B	FKM64.30A
	βis22					
GXA-500H GXA-630EH CX-500H	αiF12	HG-204	SGM7G30A	1FK2208-3AC	QSY-155B	FKM64.30A
	βis22					
GX-630H	αiF22	HG-354	SGM7G44A	1FK2208-4AC	QSY-155D	FKM66.30A
	βis22					
GX-800H	αiF22	HG-354	SGM7G44A	1FK2208-4AC	QSY-155D	FKM66.30A
	βis22					

Roller Gear Cam Type Models

CNC and Servo System						
Model	FANUC	MITSUBISHI	YASKAWA	SIEMENS	HEIDENHAIN	FAGOR
RCX-210S/H RCX-250ES/H	-	HG-154	-	1FK2205-4AF	QSY116E	-
	βis8			1FK2206-2AF		
RCX-255H	αiF8 / βis12	HG-154 / 224	-	1FK2206-4AF	QSY116J	-
RCX-320H RCX-400H	αiF12	HG-204	-	1FK2208-3AC	QSY155B	-
	βis22					

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

5th Axis Compatible Servo Motors

Worm Gear Type Models

Motor & NC system												
Model	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/H 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-170SII/HII GFA-200ESII/HII	αiF4 / βis8	αiF4 / βis8	HG-54 HG-104	HG-54 HG-104	SGMGV09A SGM7G09A	SGMGV09A SGM7G09A	1FK2205-4AF 1FK2206-2AF	1FK2206-4AF	QSY-116C	QSY-116C	FKM22.30A	FKM42.30A
GFA-210S/H	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
GTFAS-125S	-	-	HG-75S	HG-54S	SGM7G03A	SGM7G09A	-	-	-	-	-	-
GTFAE-210S-2W-320 GFA-255H/HB 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	SGMGV13A	-	-	-	-	-	-
GTFAE-210S GTFAE-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
GTFAE-320XB/H	αiF4 / βis8	αiF8 / βis12	HG-104	HG-224	SGMGV09A SGM7G09A	SGMGV13A SGM7G13A	1FK2205-4AF 1FK2206-2AF	1FK2206-4AF	QSY116E	QSY116J	FKM42.30A	FKM42.30A
GTFAE-320XBL(S)	αiF4 / βis8	αiF12 / βis22	HG-104	HG-204	SGMGV13A SGM7G13A	SGMGV30A SGM7G30A	1FK2206-4AF	1FK2208-3AC	QSY116E	QSY155B	FKM42.30A	FKM64.30A
GTFAE-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 QSY-130E	QSY155C	FKM44.30A	FKM64.30A
GTFAE-500XB/XBL	αiF8 / βis12	αiF22	HG-154	HG-354	SGMGV13A SGM7G13A	SGMGV30A SGM7G30A	1FK2206-4AF	1FK2208-4AC	QSY-116J QSY-130E	QSY155F	FKM44.30A	FKM66.30A
GTFAE-650EHB	αiF12 / 3000-B	αiF40 / 3000-B With Fan	-	-	-	-	1FK7083	1FK7103	QSY155C	QSY190D	-	-
GTFAI-650EHB GTFAI-720EHB	αiF12 / 3000-B	αiF30 / 3000-B αiF40 / 3000-B With Fan	-	-	-	-	1FK7083	1FK7103	QSY155C	QSY190D	-	-

Roller Gear Cam Type Models

Motor & NC system												
Model	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
RCF-170S/H	αiF4 / βis8	αiF4+B / βis8+B	HG-54 HG-104	HG-104+B	-	-	1FK7060 1FK2206-2AF	1FK7063+B 1FK2206-4AF+B	QSY116C	QSY116C+B	-	-
RCF-210S/H	αiF4 / βis8	αiF4+B / βis8+B	HG-104	HG-104+B	-	-	1FK7060 1FK2206-2AF	1FK7063+B 1FK2206-4AF+B	QSY116C	QSY116C+B	-	-
RCF-255H	αiF8 / βis8	αiF8+B / βis12+B	HG-104	HG-154+B	-	-	1FK7063 1FK2206-4AF	1FK7063+B 1FK2206-4AF+B	QSY116E	QSY116E+B	-	-
RCF-320H	αiF8 / βis12	αiF22+B / βis22+B	HG-154	HG-204+B	-	-	1FK7063 1FK2206-4AF	1FK7083+B 1FK2208-3AC+B	QSY116E	QSY155C+B	-	-

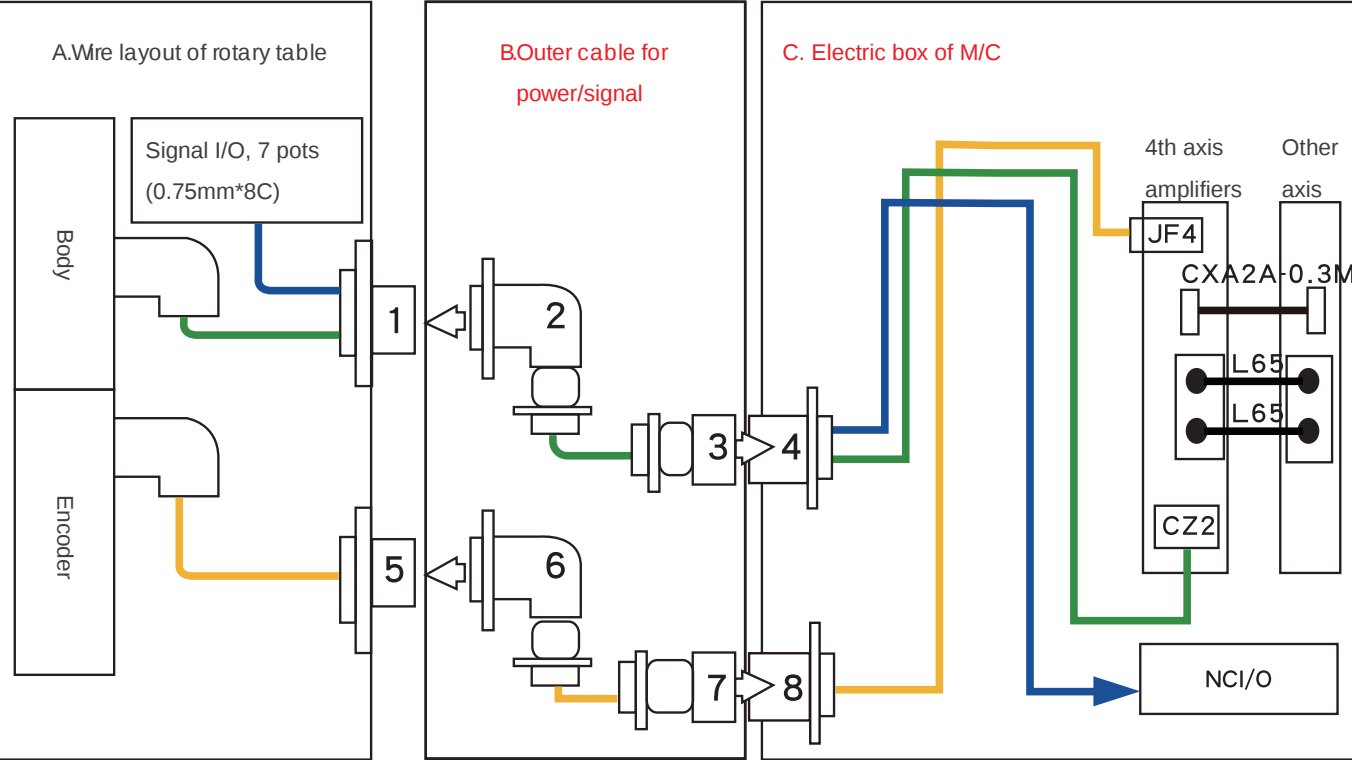
* Please refer to the basic X/Y/Z axial motor to identify compatible 4/5th motor specification.

Diagram Illustration

Diagram sample to connect Japan NC



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



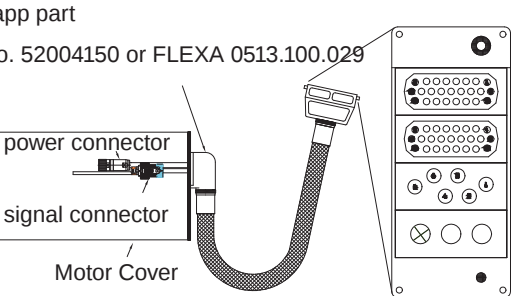
Cable spec. for JP NC

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



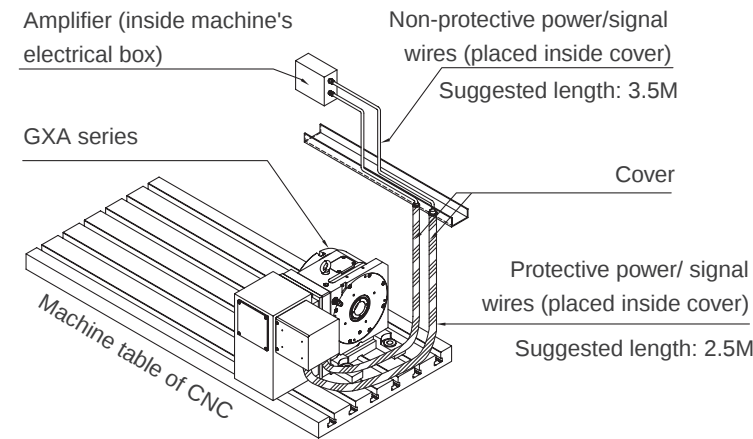
Adherent-type connector (European CNC system or with optical encoder)
One outlet-type connector is used for Siemens and Heidenhain controls.



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

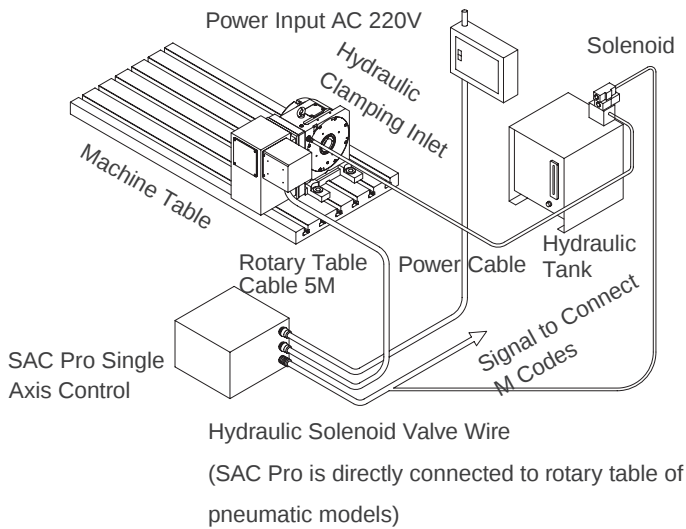
Guidance to Select Rotary Table

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



SAC Pro Series- Single Axis Control

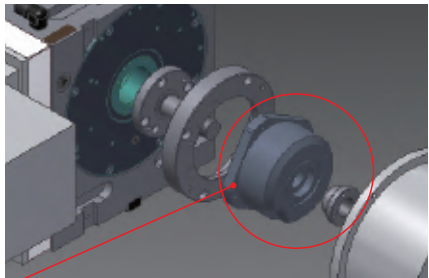


- Features:**
- For machine NC without 4th axis function, SAC Pro provide signals to allow indexing application (no simultaneous function available).
 - Programs of rotary table can be directly input through SAC Pro and allow machine NC M code command.
 - Compatible with any brand of NC control.

OPTIONAL OPTICAL SCALE



±5"		FANUC	MITSUBISHI	SIEMENS	±5"
Heidenhain Model	RCN2390 F	●			H2AF-26-D90
	RCN2390 M		●		H2AM-26-D90
	RCN2380			●	H2AS-23-D90
	RCN2310				
±10"		FANUC	MITSUBISHI	SIEMENS	±10"
Heidenhain Model	ECN2190 F	●			H2AF-23-D87
	ECN2190 M		●		H2AM-23-D87
	ECN2180			●	H2AS-23-D87



Heidenhain encoder

* Recommended option for titling axis of 5 axis.

Guidance to Select Rotary Table

SELECT A PROPER ROTARY TABLE ACCORDING TO WORKPIECE AND CUTTING CONDITIONS

Workpiece diameter

Within rotary table diameter

Workpiece weight

Within allowable load range

Indexing processing

FXL value should be within the range of clamping torque

Eccentric Load

- Movement of inertia of workpiece should be within the permissible angle
- Consider interference

For workpiece with large diameter but light weight

- 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.

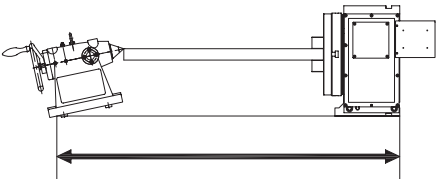


Fig 1

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.

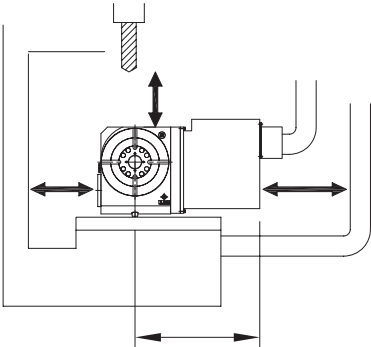


Fig 2

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.

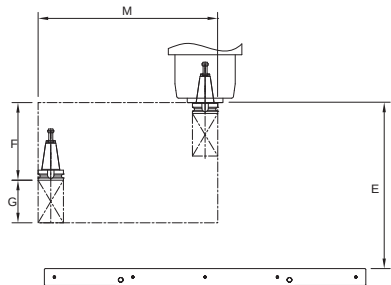


Fig 3

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 P79_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) 5th Axis cable connector located at ☐ rear (AC axis application) ☐ front (BC axis application)	Catalog P79_Fig. 5 Catalog P79_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 P79_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 P72
Q12	Air / Hydraulic System accessories	☐ Air booster (air-oil converter) 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 P72
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 hydraulic 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: _____	

Order Sheet of 4/5th axis

M/C table

Fig 4

Connector Location

Fig 5

1. AC axis

2. BC axis

Fig 6

Illustration of Tilting Angle Range

1. AC axis application

2. BC axis application

Fig 7

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 P81_Fig.1
	T-slot pitch (B)	☐ 100mm ☐ 125mm ☐ 150mm ☐ Others _____	Catalog P81_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 P69	
		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)	
Peripheral Accessories	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 P72	
	Fixture plate and Accessories	☐ Required (Please discuss more details with detron)	Catalog P71	

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 P69 & P70

Order Sheet of DDM Rotary Table

Comparison Summary between and Others

Fig. 1

Fig. 2

Fig. 3

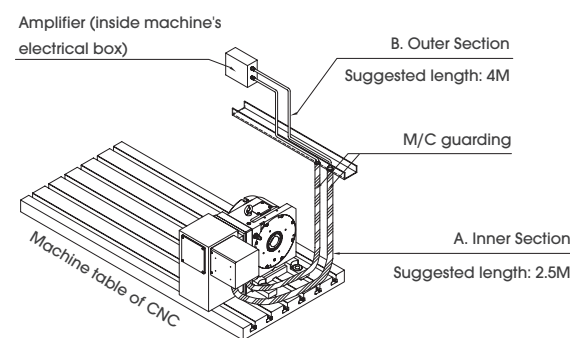


Fig.3

Comparison Summary between and Others

Brand		detron	others	detron	others	detron	others
NC table spec	mm	Ø255		Ø320		Ø400	
Height of center	mm	190 (Large)	160	210	210	255	255
Center bore dimeter	mm	140	40	180	40	220	40
Bearing	-	Integrated spindle with radial-axial bearing built-in Rigidity upgraded	Taper roller bearing	Integrated spindle with radial-axial bearing built-in Rigidity upgraded	Taper roller bearing	Integrated spindle with radial-axial bearing built-in Rigidity upgraded	Taper roller bearing
Dynamic load	kN	156.8 (45% up)	108	196 (31% up)	150	300 (62% up)	185
Momentum	kN-m	11 (89% up)	5.8	17.5 (50% up)	11.7	39.2 (82% up)	21.5
Worm Gear module	mm	M3 (20% up)	M2.5	M3	M3	M4	M4
Clamping Force	N-m	900 (80% up)	500	1600 (88% up)	850	3000 (66% up)	1800
Brake structure	-	Exclusive double- ring drum brake. Safe seal.	Disk brake or brake drum in single ring	Exclusive double- ring drum brake. Safe seal.	Disk brake or brake drum in single ring	Exclusive double- ring drum brake. Safe seal.	Disk brake or brake drum in single ring
Waterproof	-	O-ring sealed, initial barotropic, IP65	Caulking with silicon	O-ring sealed, initial barotropic, IP65	Caulking with silicon	O-ring sealed, initial barotropic, IP65	Caulking with silicon
Allowable cutting torque	N-m	550 (15% up)	480	780	780	1700 (70% up)	998

