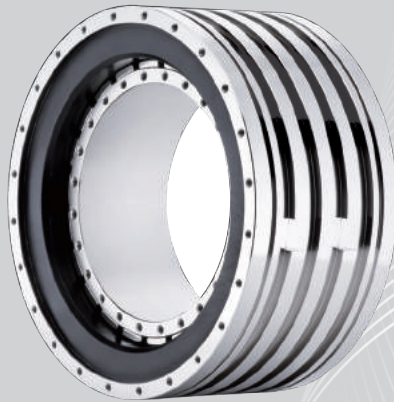




Taiwan NO.1

TJR CNC Rotary Table



Driven by D.D. Motor



Driven by roller gear cam

Made by Japanese roller gear cam master



The 4th & 5th Axis
Two D.D. Motors



Tilt : Roller Gear Cam
Rotary : D.D. Motor

The 4rd Edition



TJR CNC Rotary Table

The 4th Axis Direct Drive Motor Series

- Pneumatic Brake



AD-170
without faceplate



AD-260iB
with faceplate
Equipped with water cooling
and auto self-locking system



AD-260iB
without faceplate
Equipped with water cooling
and auto self-locking system



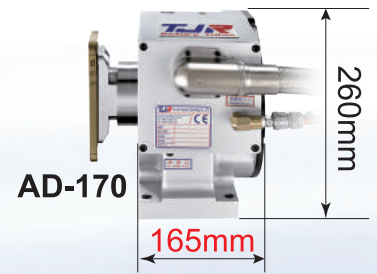
D.D. Motor (200 rpm)



AD-170
with faceplate



AD-170
(Ex: Machining cell phone)



AD-170

| Item | Unit | AD - 170 | AD - 210 | AD - 260iB | Horizontal HAD-170 / 210F / 250F | |
|------------------------------------|------------------------|----------------------------------|----------------------------------|--|-------------------------------------|------|
| Table Diameter | mm | Ø170 | Ø210 | Ø250 | Ø170 , Ø210 , Ø250 | |
| Diameter of Table Central Hole | mm | - | - | - | - | |
| Inner Diameter of Mandrel Sleeve | mm | Ø40H7 | Ø40H7 | Ø46H7 | Ø40H7 | |
| Diameter of Center Through Hole | mm | Ø40 | Ø40 | Ø46 | Ø40 | |
| Center Height (Vertical) | mm | 135 | 160 | 160 | - | |
| Table Height (Horizontal) | mm | - | - | - | 192.5 | |
| Table T-slot Width | mm | 12H7 | 12H7 | 12H7 | 12H7 | |
| Guide Block Width | mm | 18h7 | 18h7 | 18h7 | 18h7 | |
| Cooling System | - | Free Cooling | Free Cooling | Free Cooling / Water Cooling | Free Cooling | |
| Min. Increment | deg. | 0.001 | 0.001 | 0.001 | 0.001 | |
| Indexing Precision | sec. | 20 | 20 | 20 | 20 | |
| Repeatability | sec. | 4 | 4 | 4 | 4 | |
| Clamping System (Pneumatic) | kg/cm ² | 6 | 6 | 6 | 6 | |
| Clamping Torque | Nm | 310 | 310 | 450 (Powerful) | 310 | |
| Servo Motor Model | - | DD Motor | DD Motor | DD Motor | DD Motor | |
| Speed Reduction Ratio | - | Direct Drive | Direct Drive | Direct Drive | Direct Drive | |
| Rated / Max. Speed | r.p.m | 150 / 200 | 150 / 200 | 150 / 200 | 150 / 200 | |
| Rated / Max. Cutting Torque | Nm | 48 / 260 | 48 / 260 | 48 (Water Cooling 118) / 260 | 48 / 260 | |
| Allowable Inertia Load Capacity | kg·cm·sec ² | 1.08 | 1.65 | 7.8 | 2.5 | |
| Allowable Workpiece Load (dynamic) | Vertical | kg | Please refer to the manual | | | |
| | with Tailstock | kg | | | | |
| | Horizontal | kg | | | | |
| Allowable Load (with clamping) | F | N | 8000 | 8000 | 10000 | 8000 |
| | FxL | Nm | 105 | 105 | 231 | 690 |
| | FxL | Nm | 310 | 310 | 500 | 310 |
| Net Weight (D.D motor included) | kg | 55 | 61 | 84 | 60 / 61 / 62 | |
| Electrical Specification | | | | | | |
| Encoder | - | Subject to demand and controller | Subject to demand and controller | Subject to demand and controller | Subject to demand and controller | |
| Voltage (Back E.M.F) | Vrms/100rpm | 67.2 | 67.2 | 67.2 | 67.2 | |
| Rotor Poles | - | 44 | 44 | 44 | 44 | |
| Rated / Max. Current | Arms | 4.4 / 13.2 | 4.4 / 13.2 | 4.4 / 13.2 / 11.8 / 34.5 (Water-Cooling Current) | 4.4 / 13.2 | |
| Power Rating | KW | 0.75 | 0.75 | 0.75 / 1.9 (Water Cooling) | 0.75 | |



HAD-170, 210F, 250F
(Driven by 200 rpm D.D. Motor)

Mounted on the **surface grinder**, it can work for **rotary surface grinding** and **side grinding** (the faceplate can be enlarged)



AD-260iB + tailstock + fixture plate



RT-135

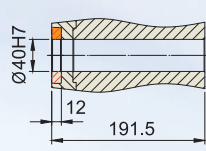
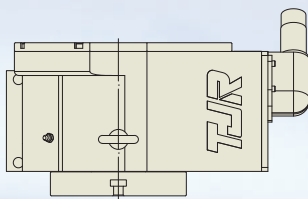


RT-170F

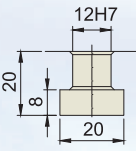
Rotary tailstock without brake

While using **DDM** rotary table, it's recommended to employ table **without faceplate** and simplified tailstock. Thus, it can increase the available loading capacity for fixtures and workpieces.

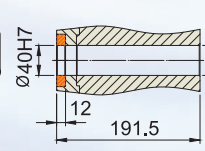
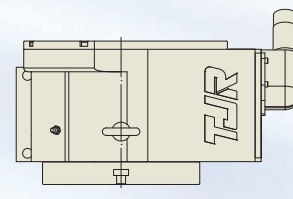
AD-170 Direct Drive (200 rpm)



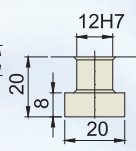
Drawing of Central Hole



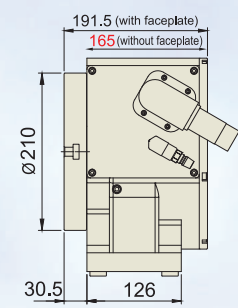
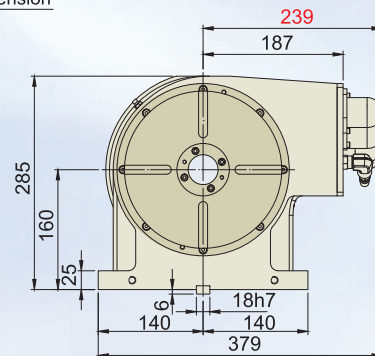
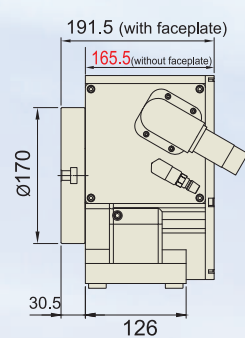
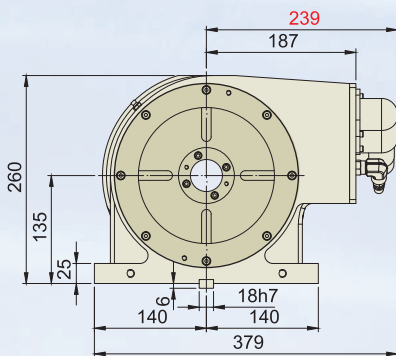
T-Slot Dimension



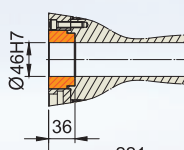
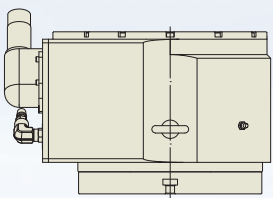
Drawing of Central Hole



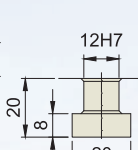
T-Slot Dimension



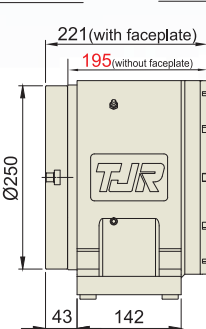
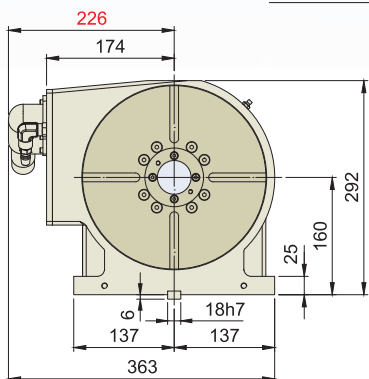
AD-260iB Direct Drive (200 rpm)



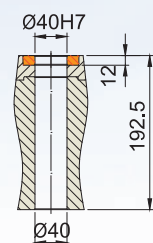
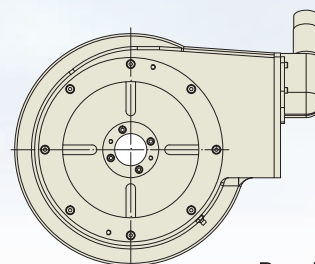
Drawing of Central Hole



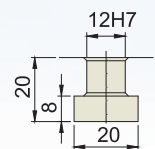
T-Slot Dimension



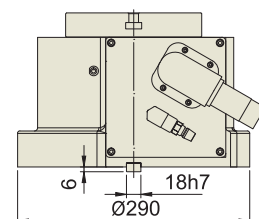
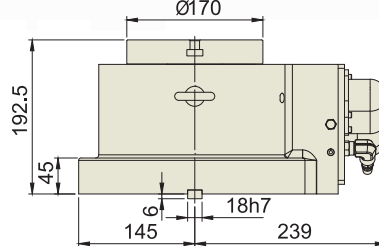
HAD-170 Direct Drive (200 rpm)



Drawing of Central Hole



T-Slot Dimension



TJR CNC Rotary Table

The 4th & 5th Axis Direct Drive Motor Series The 4th Axis Direct Drive Motor Series

- Pneumatic Brake / Hydraulic Brake



D.D. Motor



FAD-170F (Two D.D. Motors)
Tilt axis : 200 rpm
(Equipped with auto self-locking system)
Rotary axis : 300 rpm



FAD-170F-RC210 (One D.D. Motor)
Tilt axis : Driven by 80 rpm Roller Gear Cam
Rotary axis : Driven by 300 rpm D.D. Motor



FHD-650-iD650
(Two D.D. Motors / Hydraulic Brake)
Tilt axis : 120 rpm
Rotary axis : 210 rpm

| Item | Unit | Two D.D. Motors : 300 rpm | | Rotary : Driven by One D.D. Motor Tilt : Driven by Roller Gear Cam | | | |
|--|------------------------|----------------------------------|------------------------------|---|------------------|------|------|
| | | FAD - 170F | FAD - 210F | FAD - 170F-RC210 | FAD - 210F-RC210 | | |
| Table Diameter | mm | Ø170 | Ø210 | Ø170 | Ø210 | | |
| Diameter of Table Central Hole | mm | - | | - | | | |
| Inner Diameter of Mandrel Sleeve | mm | Ø40H7 | | Ø40H7 | | | |
| Diameter of Center Through Hole | mm | Ø40 | | Ø40 | | | |
| Table Height (Horizontal) | mm | 250 | | 250 | | | |
| Table T-slot Width | mm | 12H7 | | 12H7 | | | |
| Guide Block Width | mm | 18h7 | | 18h7 | | | |
| Axis | - | Rotary axis | Tilt axis ±100° | Rotary axis | Tilt axis ±100° | | |
| Transmission Mechanism | - | DD Motor | DD Motor | DD Motor | Roller Gear Cam | | |
| Cooling System | - | Free Cooling | Free Cooling (Water cooling) | Free Cooling | - | | |
| Min. Increment | deg. | 0.001 | 0.001 | 0.001 | 0.001 | | |
| Indexing Precision | sec. | 20 | 30 | 20 | 50 | | |
| Repeatability | sec. | 4 | 8 | 4 | 8 | | |
| Clamping System (Pneumatic) | kg/cm ² | 6 | 6 | 6 | 6 | | |
| Clamping Torque | Nm | 310 | 450 (Powerful) | 310 | 310 | | |
| Servo Motor Model | FANUC | Taper shaft with key | DD Motor | DD Motor | α8iF / β12is | | |
| | MITSUBISHI | Taper shaft with key | | | HF-154 | | |
| Speed Reduction Ratio | - | Direct Drive | Direct Drive | Direct Drive | 1 : 36 | | |
| Rated / Max. Speed | r.p.m | 200 / 300 | 150 / 200 | 200 / 300 | 83.3 | | |
| Rated / Max. Cutting Torque | Nm | 29 / 116 | 48 (Water Cooling 118) / 260 | 29 / 116 | 150 | | |
| Allowable Inertia Load Capacity (Horizontal) | kg·cm·sec ² | 1.08 (Ø170) | 1.65 (Ø210) | 1.08 (Ø170) | 1.65 (Ø210) | | |
| Allowable Workpiece Load | 0° Horizontal | kg | Please refer to the manual | | | | |
| | 0°~90° Tilt | kg | | | | | |
| Allowable Load (with clamping) | F | N | | | | 4000 | 4000 |
| | FxL | Nm | | | | 450 | 310 |
| | FxL | Nm | | | | 310 | 310 |
| Net Weight (D.D motor included) | kg | 220 | | | | 223 | 173 |
| Electrical Specification | | | | | | | |
| Encoder | - | Subject to demand and controller | | Subject to demand and controller | | | |
| Voltage (Back E.M.F) | Vrms/100rpm | Rotary axis: 38.8 | | Rotary axis: 38.8 | | | |
| Rotor Poles | - | 44 | | 44 | | | |
| Rated / Max. Current | Arms | 4.25 / 12.75 | | 4.25 / 12.75 | | | |
| Power Rating | KW | 0.77 | 0.76 | 0.77 | - | | |

TJR CNC Rotary Table

The 4th & 5th Axis Direct Drive Motor Series The 4th Axis Direct Drive Motor Series

- Pneumatic Brake



D.D. Motor



AD-250HS
(super high speed: 2000 rpm)
Can work as a **horizontal lathe**



HAD-210F-HS (2000 rpm)
Can work as a **lathe**



FAD-300F-HS
Tilt axis : 200 rpm
Rotary axis : 2000 rpm



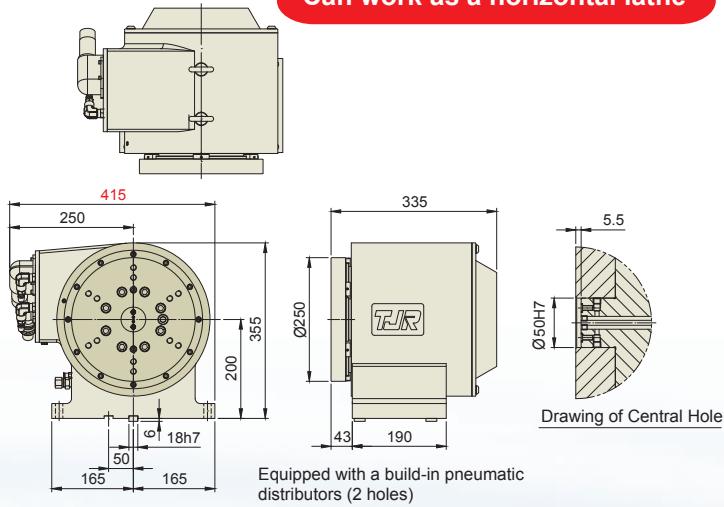
FAD-170F-HS (Two D.D. Motors)
Tilt axis : 200 rpm
Rotary axis : 2000 rpm

| Item | Unit | Can work as a lathe | Horizontal | Two D.D. Motors : 2000 rpm Can work as a lathe | |
|--|-----------------------------|----------------------------------|----------------------------------|--|--------------------------|
| | | AD - 250HS | HAD-210F-HS | FAD-170F-HS | FAD-210F-HS |
| Table Diameter | mm | Ø250 | Ø210 | Ø170 | Ø210 |
| Diameter of Table Central Hole | mm | Ø50H7 x 5.5 deep | Ø40H7 x 12 deep | Ø40H7 x 12 deep | |
| Inner Diameter of Mandrel Sleeve | mm | - | - | - | - |
| Diameter of Center Through Hole | mm | - | - | - | - |
| Center Height (Vertical) | mm | 200 | - | - | - |
| Table Height (Horizontal) | mm | 335 | 240 | 290 | |
| Table T-slot Width | mm | - | - | - | |
| Guide Block Width | mm | - | 14h7 | 18h7 | |
| Axis | - | - | - | Rotary axis | Tilt axis ±100° |
| Cooling System | - | Water Cooling | Water Cooling | Water Cooling | Free Cooling |
| Transmission Mechanism | - | D.D. Motor | D.D. Motor | D.D. Motor | D.D. Motor |
| Min. Increment | deg. | 0.001 | 0.001 | 0.001 | 0.001 |
| Indexing Precision | sec. | 20 | 20 | 20 | 30 |
| Repeatability | sec. | 4 | 4 | 4 | 8 |
| Clamping System (Pneumatic) | kg/cm ² | 6 | 6 | 6 | 6 |
| Clamping Torque | Nm | 450 (Powerful) | 310 | 310 | 500 |
| Servo Motor Model | FANUC MITSUBISHI | - | DD Motor | DD Motor | DD Motor |
| Speed Reduction Ratio | - | Direct Drive | Direct Drive | Direct Drive | Direct Drive |
| Rated / Max. Speed | r.p.m | 1100 / 2000 | 1900 / 2880 | 1900 / 2880 | 150 / 200 |
| Rated / Max. Cutting Torque | Nm | 113 / 169 | 48 / - | 48 / - | 48 / (water cooling 118) |
| Allowable Inertia Load Capacity (Horizontal) | kg·cm·sec ² | 3.1 | - | - | |
| Allowable Workpiece Load (dynamic) | 0°Horizontal 0°~90° Tilt | kg | Please refer to the manual | | |
| Allowable Load (with clamping) | F FxL FxL | N Nm Nm | | | |
| Net Weight (D.D motor included) | kg | 158 | - | - | |
| Electrical Specification | | | | | |
| Encoder | - | Subject to demand and controller | Subject to demand and controller | Subject to demand and controller | |
| Voltage (Back E.M.F) | Vrms/100rpm | 33 | 14.2 | Rotary axis : 14.2 | |
| Rotor Poles | - | 22 | 22 | 22 | |
| Rated / Max. Current | Arms | 26.5 / 50.2 | 26.1 | 26.1 | |
| Power Rating | KW | 9.9 | 9.7 | 9.7 | 0.76 |

AD-250HS (2000 rpm)



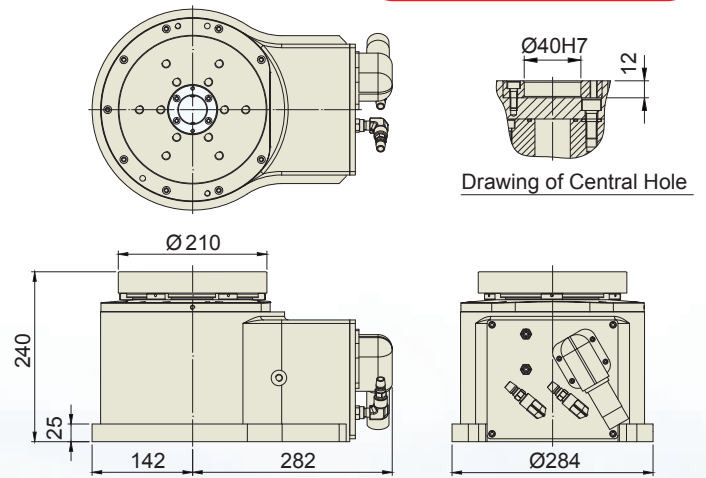
Can work as a horizontal lathe



HAD-210F-HS (2000 rpm)



Can work as a lathe



Two D.D. Motors : 2000 rpm Can work as a lathe

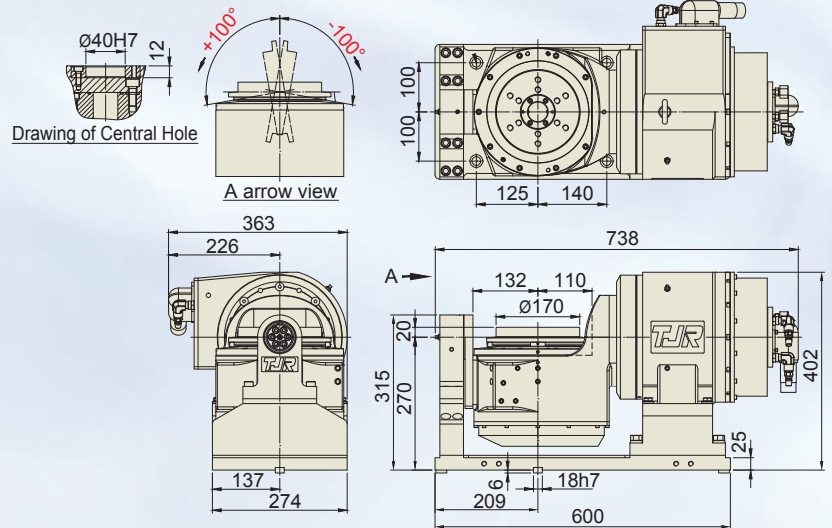
FAD-300F-HS

| | |
|----------------------------------|---------------------------|
| Ø300 | |
| Ø25H7 x 12 deep | |
| - | |
| - | |
| - | |
| 385 | |
| 14H7 | |
| 14h7 | |
| Rotary axis | Tilt axis $\pm 120^\circ$ |
| Water Cooling | Water Cooling |
| D.D. Motor | D.D. Motor |
| 0.001 | 0.001 |
| 20 | 20 |
| 4 | 8 |
| 6 | 6 |
| 430 | 730 |
| DD Motor | DD Motor |
| Direct Drive | Direct Drive |
| 818 / 2000 | 50 / - |
| 113 / - | 554 / 741 |
| - | |
| - | |
| 730 | |
| 430 | |
| 730 | |
| Subject to demand and controller | |
| Rotary axis: 33 | |
| 22 | |
| 26.5 / 50.2 | |
| 9.9 / 2.11 | |

FAD-170F-HS (2000 rpm)



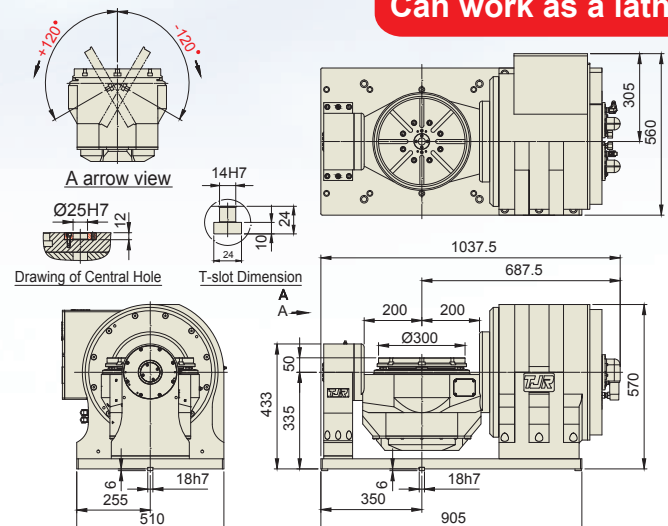
Can work as a lathe



FAD-300F-HS (2000 rpm)



Can work as a lathe

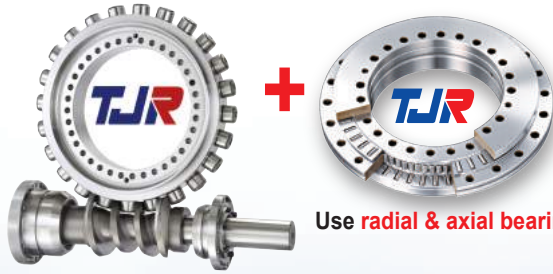


Equipped with a build-in pneumatic distributors (2 holes)

TJR CNC Rotary Table

The 4th Axis Roller Gear Cam Series

- Pneumatic Brake / Hydraulic Brake



Use radial & axial bearings



RC-170R



RC-255N

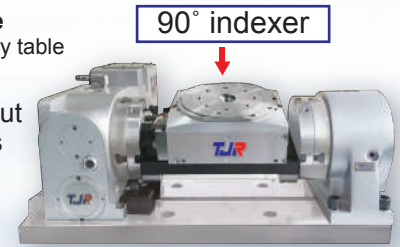


RC-320N

A simplified 4th & 5th axis rotary table

Tilt axis: roller gear cam or DD motor rotary table
Rotary axis: 90° indexer

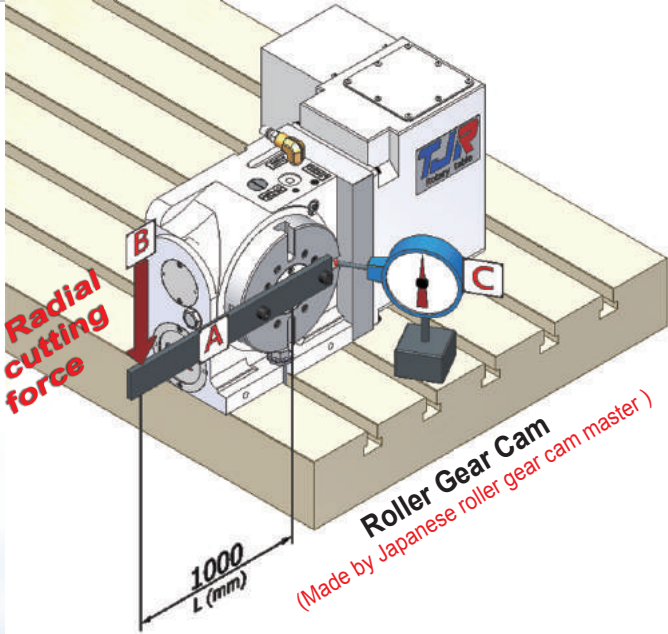
It can do five face machining without employing a standard 4th & 5th axis rotary table.



Driven by Roller Gear Cam
(Speed : 80 rpm)

Made by Japanese roller gear cam master

| Item | Unit | RC-170R | RC-210R | RC - 255R(N) | RC - 320R(N) | |
|--|------------------------|----------------------------|------------------|------------------|--------------------|-------------------------|
| Table Diameter | mm | Ø170 | Ø210 | Ø255 | Ø320 | |
| Diameter of Table Central Hole | mm | Ø67 | Ø67 | Ø110 | Ø150 | |
| Inner Diameter of Mandrel Sleeve | mm | Ø40H7 | Ø40H7 | Ø80H7 | Ø120H7 | |
| Diameter of Center Through Hole | mm | Ø40 | Ø40 | Ø80 Big Bore | Ø120 Big Bore | |
| Center Height (Vertical) | mm | 135 | 160 | 160 | 210 | |
| Table Height (Horizontal) | mm | 152 | 152 | 200 | 235 | |
| Table T-slot Width | mm | 12H7 | 12H7 | 12H7 | 14H7 | |
| Guide Block Width | mm | 18h7 | 18h7 | 18h7 | 18h7 | |
| Min. Increment | deg. | 0.001 | 0.001 | 0.001 | 0.001 | |
| Indexing Precision | sec. | 20 | 20 | 20 | 20 | |
| Repeatability | sec. | 4 | 4 | 4 | 4 | |
| Clamping System (Pneumatic / Hydraulic) | kg/cm ² | Pne.6 | Pne.6 | Hyd.35 | Hyd.35 | |
| Clamping Torque | kg-m | 31 | 31 | 70 | 115 | |
| Servo Motor Model | FANUC | Taper shaft with key | α4i / α8i / β8is | α4i / α8i / β8is | α8i / β8is (Taper) | α12i / β22is (Straight) |
| | MITSUBISHI | Taper shaft with key | HF-54 / 104 | HF-54 / 104 | HF-104 / 154 | HF-204 (Straight) |
| Speed Reduction Ratio | - | 1 : 36 | 1 : 36 | 1 : 60 | 1 : 90 | |
| Max. Rotation Rate of Table (Calculate with FANUC αMotor) | r.p.m | 83.3 | 83.3 | 50 | 33.3 | |
| Allowable Inertia Load Capacity (Horizontal) | kg·cm·sec ² | 5.4 | 8.3 | 20.3 | 44.8 | |
| Allowable Workpiece Load (dynamic) | Vertical | kg | 75 | 75 | 100 | 150 |
| | with Tailstock | kg | 150 | 150 | 250 | 350 |
| | Horizontal | kg | 150 | 150 | 250 | 350 |
| Allowable Load (with clamping) | F | kgf | 1450 | 1450 | 2000 | 3000 |
| | FxL | kgf · m | 100 | 100 | 112 | 300 |
| | FxL | kgf · m | 31 | 31 | 70 | 115 |
| Strength of Roller Gear Cam | kgf · m | Please refer to the manual | | | | |
| Net Weight (Servo motor excluded) | kg | 44 | 52 | 110 | 187 | |



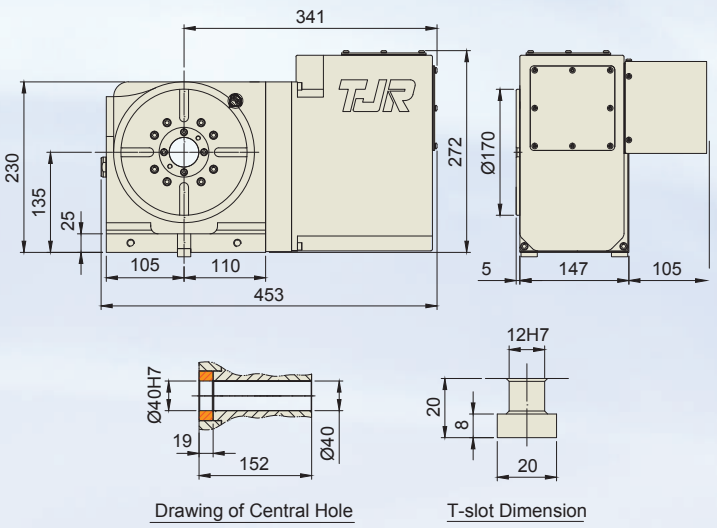
RC-170-SP
Swivel Spindle Head :
Driven by **Roller Gear Cam**



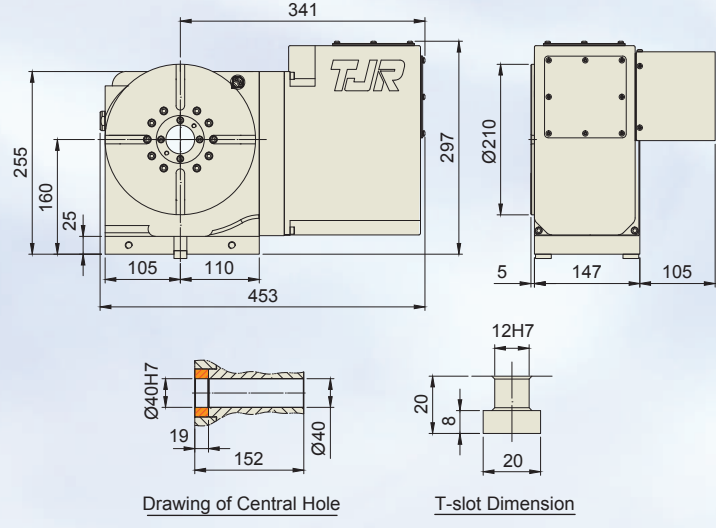
If you want to know what is the maximal W KGs and L mm which TJR roller gear cam can sustain while keeping the deformation within 0.01 mm, please contact us to ask for the detailed technical report.

Made by Japanese roller gear cam master

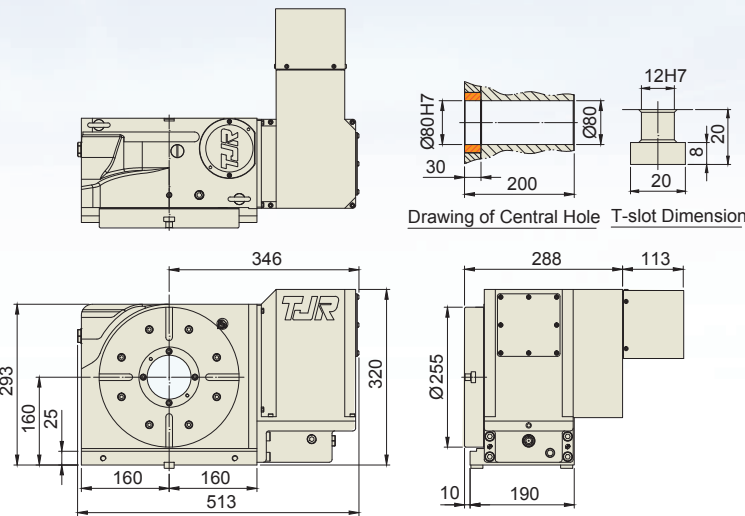
RC-170R



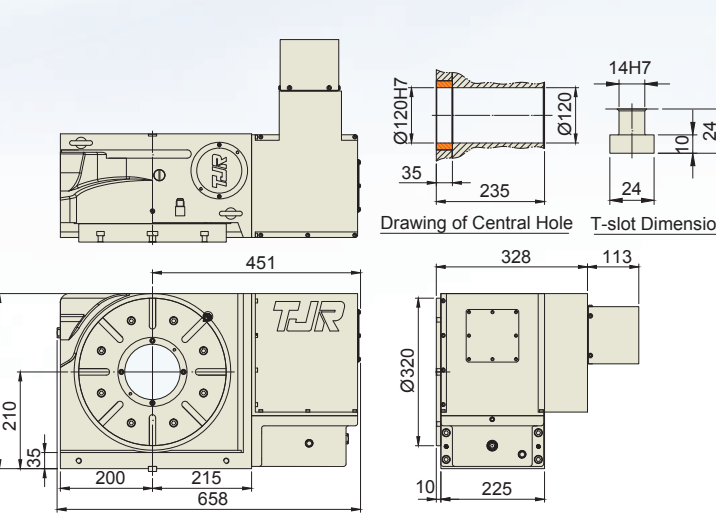
RC-210R



RC-255N (Sheet Metal Cover Reduction)



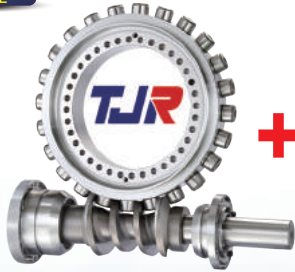
RC-320N (Sheet Metal Cover Reduction)



TJR CNC Rotary Table

The 4th & 5th Axis Roller Gear Cam Series

- Pneumatic Brake / Hydraulic Brake



Use radial & axial bearings

Driven by **Roller Gear Cam**
(Speed : 80 rpm)

Made by Japanese roller gear cam master



FAR-160SN-RC255
(Single-arm type)



FAR-160-RC255
(Dual-arm type)



FAR-170A-RC210
(Compact type)

Tilt axis : Driven by Roller Gear Cam



FAR-170-RC210
(Standard type)



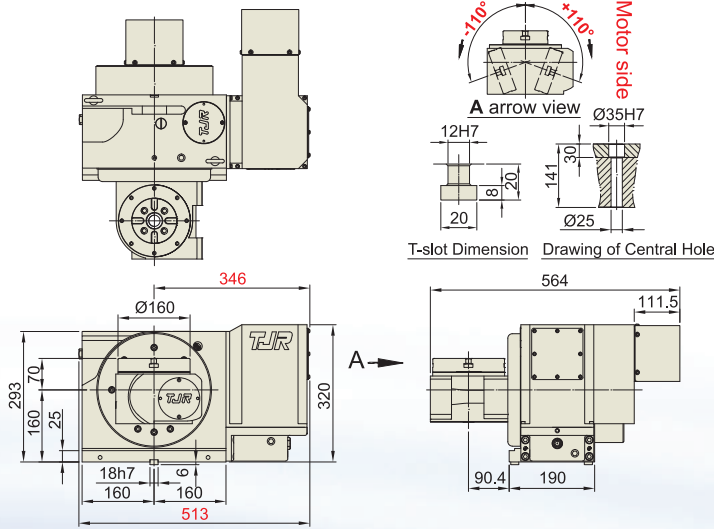
FAR-210-RC210
(Standard type)

| Item | Unit | FAR-160SN-RC255-J | FAR-160-RC255-J | FAR-170A-RC210 | | |
|--|------------------------|---------------------|---------------------------|----------------------------|---|----------------------------|
| Table Diameter | mm | Ø160 | Ø160 | Ø170 | | |
| Diameter of Table Central Hole | mm | Ø35H7 x 30 deep | | Ø67 | | |
| Inner Diameter of Mandrel Sleeve | mm | - | | Ø40H7 | | |
| Diameter of Center Through Hole | mm | Ø25 | | Ø40 | | |
| Table Height (Horizontal) | mm | Single-arm type 230 | Dual-arm type 255 | 245 | | |
| Table T-slot Width | mm | 12H7 | | 12H7 | | |
| Guide Block Width | mm | 18h7 | | 18h7 | | |
| Axis | - | Rotary axis | Tilt axis $\pm 110^\circ$ | Rotary axis | Tilt axis $\pm 100^\circ$ | |
| Transmission Mechanism | - | Worm & Worm Gear | Roller Gear Cam | Worm & Worm Gear | Roller Gear Cam | |
| Min. Increment | deg. | 0.001 | 0.001 | 0.001 | 0.001 | |
| Indexing Precision | sec. | 40 | 50 | 40 | 50 (30, if ECN-225 angle encoder is employed) | |
| Repeatability | sec. | 4 | 8 | 4 | 8 | |
| Clamping System (Pneumatic) | kg/cm ² | 5 | Hyd.35 | 6 | 6 | |
| Clamping Torque | kg-m | 13 | 70 | 31 | 31 | |
| Servo Motor Model | FANUC | Taper/Straight | $\alpha 2is / \beta 4is$ | $\alpha 12is / \beta 12is$ | $\alpha 2i / \alpha 4is / \beta 4is$ | $\alpha 12is / \beta 12is$ |
| | MITSUBISHI | Straight | HF-KP43JW04-S6 | HF-154 | HF-75 / 105 | HF-104 |
| | SIEMENS | Straight | - | - | - | - |
| | DELTA | Straight | ECMA-C20604 | ECMA-E21315 | - | - |
| | YASKAWA | Straight | SGMJV-04A | SGM7G-13A | - | - |
| Speed Reduction Ratio | - | 1 : 60 | 1 : 60 | 1 : 72 | 1 : 36 | |
| Max. Rotation Rate of Table (Calculate with FANUC a Motor) | r.p.m | 83.3 | 50 | 41.6 | 50 | |
| Allowable Inertia Load Capacity (Horizontal) | kg-cm·sec ² | 0.8 | | 2.2 | | |
| Allowable Workpiece Load (dynamic) | 0° Horizontal | kg | 25 | 60 | 60 | |
| | 0 ~ 90° Tilt | kg | 20 | 40 | 40 | |
| Allowable Load (with clamping) | F | kg | 600 | 600 | 600 | |
| | FxL | kgf | 70 | 31 | 31 | |
| | FxL | kgf · m | 13 | 13 | 31 | |
| Strength of Roller Gear Cam | kgf · m | 9 | | 18 | | |
| Net Weight (servo motor excluded) | kg | 116 | 126 | - | | |

FAR-160SN-RC255 (Single-arm type)



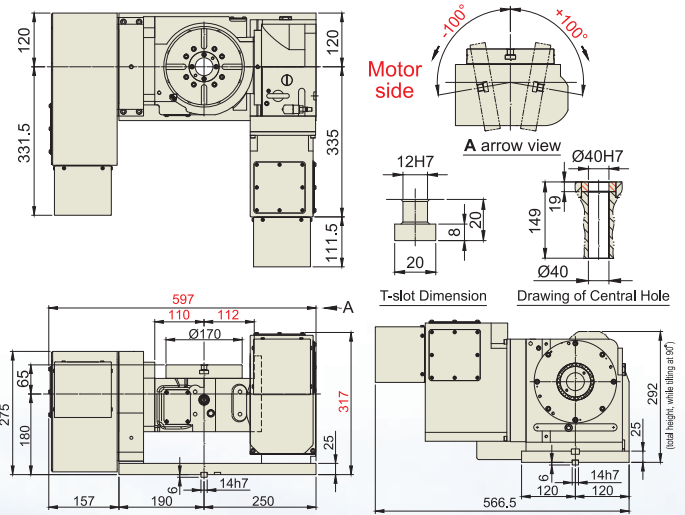
Tilt axis: Driven by Rooler Gear Cam



FAR-170A-RC210 (Compact type)



Tilt axis: Driven by Rooler Gear Cam



FAR-170-RC210

$\varnothing 170$

FAR-210-RC210

$\varnothing 210$

$\varnothing 67$
 $\varnothing 40H7$
 $\varnothing 40$
270
12H7
18h7

Rotary axis
Worm & Worm Gear

Tilt axis $\pm 100^\circ$
Roller Gear Cam

0.001

0.001

20

50 (30, if ECN-225 angle encoder is employed)

4

8

6

6

31

31

$\alpha 4i / \beta 8is$

$\alpha 12is / \beta 12is$

HF-54 / 104

HF-104

-

-

-

-

-

-

1 : 90

1 : 36

33.3

50

2.7 ($\varnothing 170$)

4.13 ($\varnothing 210$)

75

50

750

31

31

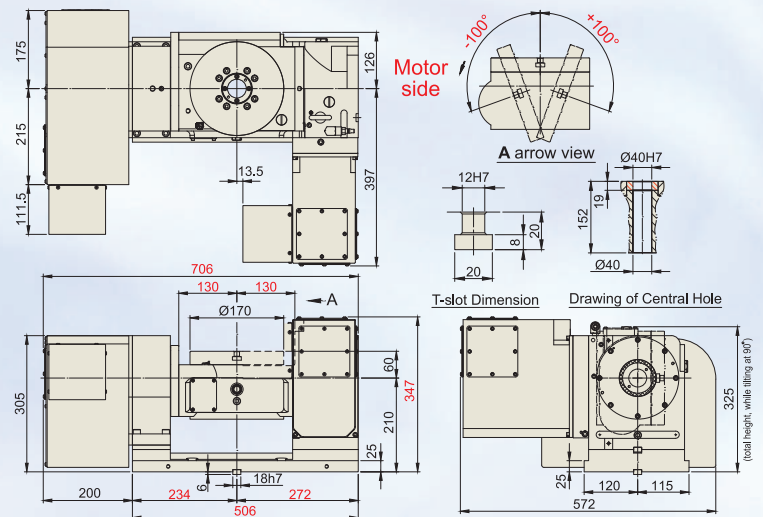
18

-

FAR-170-RC210 (Standard type)



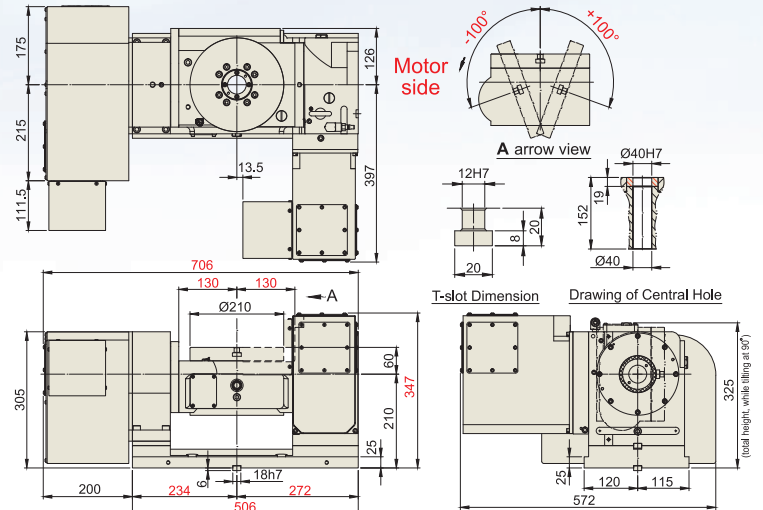
Tilt axis: Driven by Rooler Gear Cam



FAR-210-RC210 (Standard type)



Tilt axis: Driven by Rooler Gear Cam



TJR CNC Rotary Table

The 4th & 5th Axis Roller Gear Cam Series

- Hydraulic Brake

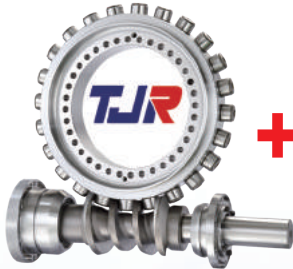


FHR-255C-RC255
(Cradle type)



FHR-255CL-RC255
(Extended cradle type)

Tilt axis : Driven by Roller Gear Cam



Use radial & axial bearings



FHR-320-RC320
(Standard type)



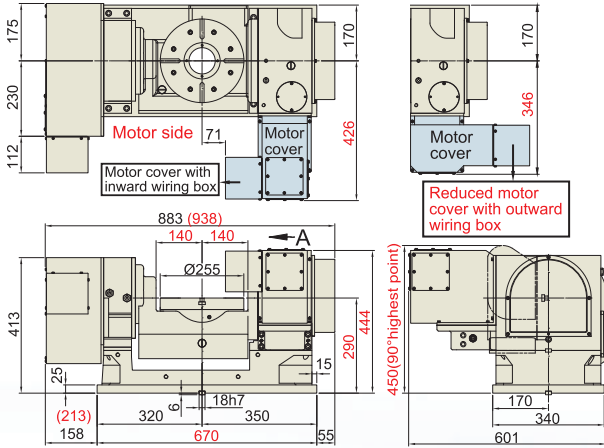
FHR-320C-RC320
(Cradle type)

Driven by **Roller Gear Cam**
(Speed : 80 rpm)

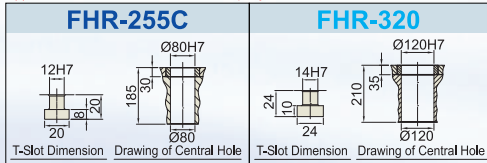
Made by Japanese roller gear cam master

| Item | Unit | FHR-255C-RC255 | FHR-255CL-RC255 | FHR-320-RC320 (Standard type) | | |
|---|------------------------|------------------|---|-------------------------------|---|---------------------------|
| Table Diameter | mm | Ø255 | | Ø320 | | |
| Diameter of Table Central Hole | mm | Ø110 | | Ø150 | | |
| Inner Diameter of Mandrel Sleeve | mm | Ø80H7 | | Ø120H7 | | |
| Diameter of Center Through Hole | mm | Ø80 | | Ø120 | | |
| Table Height (Horizontal) | mm | 290 | | 355 | | |
| Table T-slot Width | mm | 12H7 | | 14H7 | | |
| Guide Block Width | mm | 18h7 | | 18h7 | | |
| Axis | - | Rotary axis | Tilt axis $\pm 110^\circ$ | Rotary axis | Tilt axis $\pm 110^\circ$ | |
| Transmission Mechanism | - | Worm & Worm Gear | Roller Gear Cam | Worm & Worm Gear | Roller Gear Cam | |
| Min. Increment | deg. | 0.001 | 0.001 | 0.001 | 0.001 | |
| Indexing Precision | sec. | 15 | 50 (30, if ECN-225 angle encoder is employed) | 15 | 50 (30, if ECN-225 angle encoder is employed) | |
| Repeatability | sec. | 4 | 8 | 4 | 8 | |
| Clamping System (Hydraulic) | kg/cm ² | 35 | 35 | 35 | 35 | |
| Clamping Torque | kg-m | 70 | 140 | 115 | 175 | |
| Servo Motor Model | FANUC | Taper / Straight | $\alpha 12is / \beta 8is$ | $\alpha 12is / \beta 12is$ | $\alpha 8i / \alpha 12is / \beta 12is$ | $\alpha 12i / \beta 22is$ |
| | MITSUBISHI | Straight | HF-104 | HF-154 | HF-104 | HF-204 |
| | SIEMENS | Straight | 1FK7063 | 1FK7063 | - | - |
| | DELTA | Straight | ECMA-E11315RS | ECMA-E11320RS | - | - |
| | YASKAWA | Straight | SGM7G-13A | SGM7G-20A | - | - |
| Speed Reduction Ratio | - | 1 : 120 | 1 : 60 | 1 : 120 | 1 : 90 | |
| Max. Rotation Rate of Table (Calculate with FANUC α Motor) | r.p.m | 33.3 | 33.3 | 33.3 | 33.3 | |
| Allowable Inertia Load Capacity (Horizontal) | kg·cm·sec ² | 8.13 | | 25.6 | | |
| Allowable Workpiece Load (dynamic) | 0° Horizontal | kg | 100 | 200 | 150 | |
| | 0 ~ 90° Tilt | kg | 75 | 150 | 115 | |
| Allowable Load (with clamping) | F | kgf | 1500 | 1800 | 115 | |
| | FxL | kgf · m | 140 | 175 | 115 | |
| | FxL | kgf · m | 70 | 115 | 80 | |
| Strength of Roller Gear Cam | kg · m | 45 | | 80 | | |
| Net Weight (servo motor excluded) | kg | 297 | 350 | - | | |

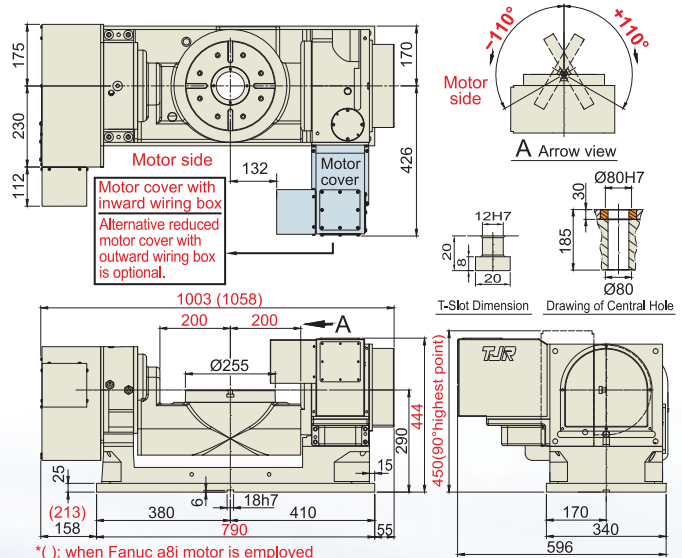
FHR-255C-RC255 (Cradle type)



*(): when Fanuc a8i motor is employed



FHR-255CL-RC255 (Extended cradle type)



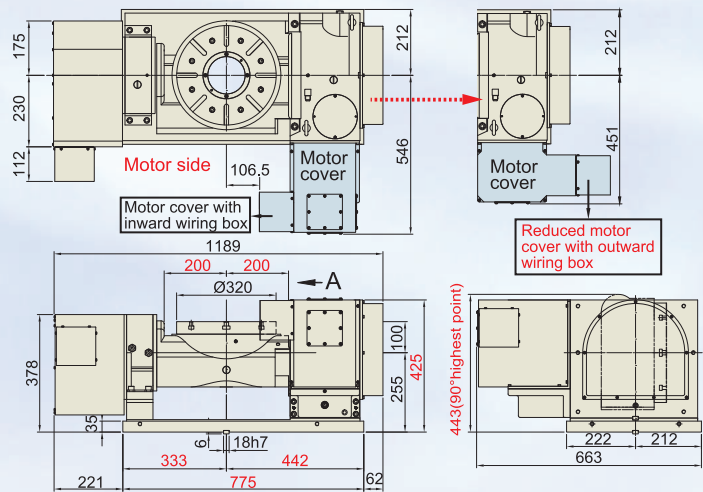
*(): when Fanuc a8i motor is employed

4-hole rotary joint can be accommodated.

FHR-320C-RC320 (Cradle type)

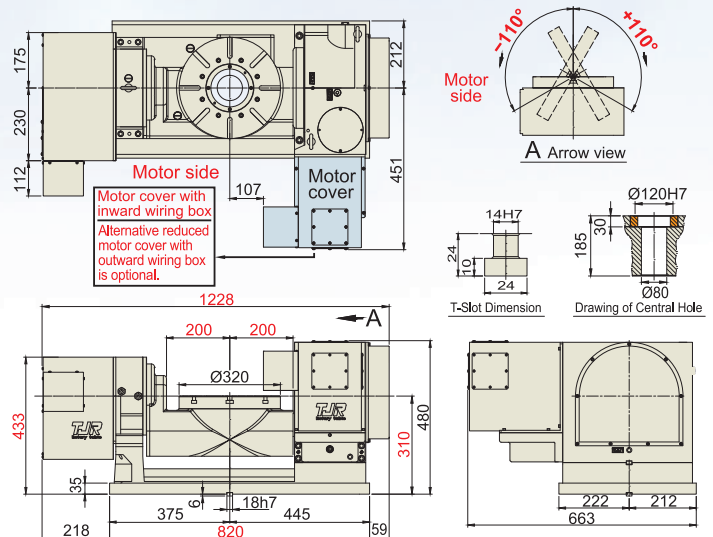
| | |
|--|---|
| | Ø320 |
| | Ø150 |
| | Ø120H7 x 30 deep |
| | Ø80 |
| | 310 |
| | 14H7 |
| | 18h7 |
| Rotary axis | Tilt axis $\pm 110^\circ$ |
| Worm & Worm Gear | Roller Gear Cam |
| 0.001 | 0.001 |
| 15 | 50 (30, if ECN-225 angle encoder is employed) |
| 4 | 8 |
| 35 | 35 |
| 70 | 175 |
| $\alpha 8i$ / $\alpha 12is$ / $\beta 12is$ | $\alpha 12i$ / $\alpha 12is$ / $\beta 22is$ |
| HF-104 | HF-204 |
| - | - |
| - | - |
| - | - |
| 1 : 120 | 1 : 90 |
| 33.3 | 33.3 |
| 25.6 | |
| 200 | |
| 100 | |
| 1800 | |
| 175 | |
| 70 | |
| 55 | |
| 568 | |

FHR-320-RC320 (Standard type)



6-hole rotary joint can be accommodated.

FHR-320C-RC320 (Cradle type)



4-hole rotary joint can be accommodated.

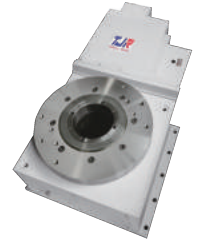
TJR CNC Rotary Table

The 4th & 5th Axis Roller Gear Cam Series

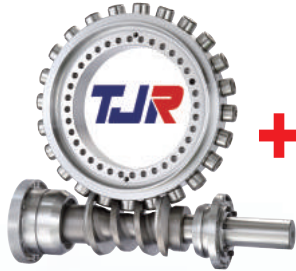
- Pneumatic Brake / Hydraulic Brake



FAR-170-2W-RC255
(2 wheel coupled)



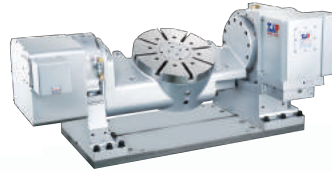
HRC-320



+



Use radial & axial bearing



FHR-400CF-RC400F
(Cradle type)



FHR-350F-2W-RC320-2A
(2 wheel coupled)

Driven by **Roller Gear Cam**
(Speed : 80 rpm)

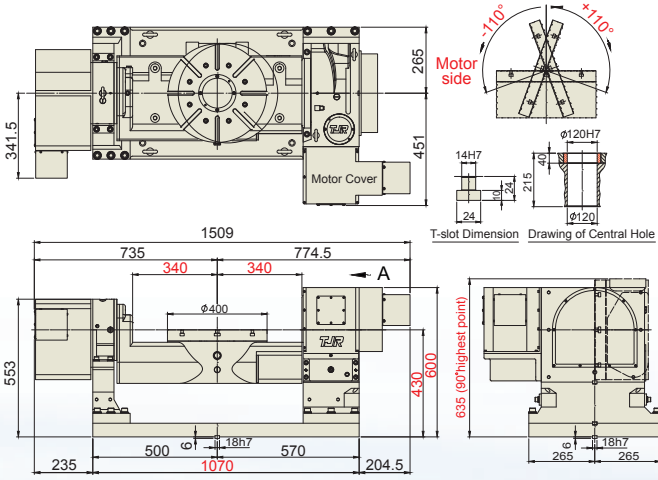
Made by Japanese roller gear cam master

Tilt axis : Driven by Roller Gear Cam

| Item | Unit | FHR- 400CF-RC400F | | FAR-170-2W-RC255 | FAR-210-2W-RC255 | |
|--|------------------------|-------------------|---|---------------------------|---|----------------------------|
| Table Diameter | mm | Ø400 | | Ø170 | Ø210 | |
| Diameter of Table Central Hole | mm | Ø150 | | Ø67 | | |
| Inner Diameter of Mandrel Sleeve | mm | Ø120H7 | | Ø40H7 | | |
| Diameter of Center Through Hole | mm | Ø120 | | Ø40 | | |
| Table Height (Horizontal) | mm | 430 | | 280 | | |
| Table T-slot Width | mm | 14H7 | | 12H7 | | |
| Guide Block Width | mm | 18h7 | | 18h7 | | |
| Axis | - | Rotary axis | Tilt axis $\pm 110^\circ$ | Rotary axis | Tilt axis $\pm 110^\circ$ | |
| Transmission Mechanism | - | Worm & Worm Gear | Roller Gear Cam | Worm & Worm Gear | Roller Gear Cam | |
| MIn. Increment | deg. | 0.001 | 0.001 | 0.001 | 0.001 | |
| Indexing Precision | sec. | 15 | 50 (30, if ECN-225 angle encoder is employed) | 20 | 60 (30, if ECN-225 angle encoder is employed) | |
| Repeatability | sec. | 4 | 8 | 4 | 8 | |
| Clamping System (Hydraulic) | kg/cm ² | 35 | 35 | Pne.6 | 35 | |
| Clamping Torque | kg-m | 115 | 175 | 31 | 140 | |
| Servo Motor Model | FANUC | Taper / Straight | $\alpha 8i / \alpha 12is / \beta 12is$ | $\alpha 12i / \beta 22is$ | $\alpha 8i / \beta 12is$ | $\alpha 12is / \beta 12is$ |
| | MITSUBISHI | Straight | HF-154 | HF-354 | HF-154 | HF-154 |
| | SIEMENS | Straight | 1FK7063 | 1FK7083 | 1FK7063 | 1FK7063 |
| | HEIDENHAIN | Straight | QSY-116E | QSY-155B | - | - |
| | DELTA | Straight | - | - | ECMA-E11315RS | ECMA-E11320RS |
| | YASKAWA | Straight | - | - | SGM7G-13A | SGM7G-20A |
| Speed Reduction Ratio | - | 1 : 120 | 1 : 90 | 1 : 90 | 1 : 60 | |
| Max. Rotation Rate of Table (Calculate with FANUC α Motor) | r.p.m | 33.3 | 33.3 | 44.4 | 33.3 | |
| Allowable Inertia Load Capacity (Horizontal) | kg·cm·sec ² | 40 | | 2.7 | 4.13 | |
| Allowable Workpiece Load (dynamic) | 0° Horizontal | kg | | 38 (single plate) | | |
| | 0-90° Tilt | kg | | 25 (single plate) | | |
| Allowable Load (with clamping) | F | kg | | 750 | | |
| | FxL | kgf | | 140 | | |
| | FxL | kgf·m | | 31 | | |
| Strength of Roller Gear Cam | kgf·m | 80 | | 18 | | |
| Net Weight (servo motor excluded) | kg | - | | 280 | 287 | |

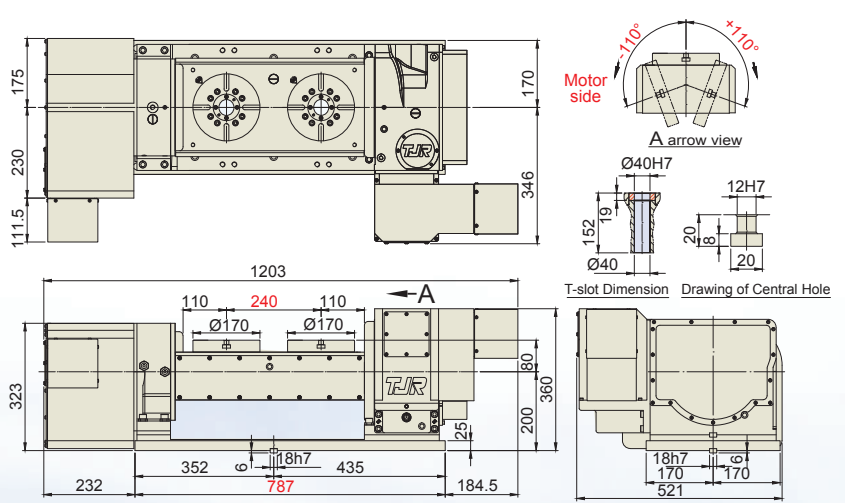
FHR-400CF-RC400F (Cradle type)

Tilt axis : Driven by Roller Gear Cam



FAR-170-2W-RC255 (2 wheel coupled)

Tilt axis : Driven by Roller Gear Cam



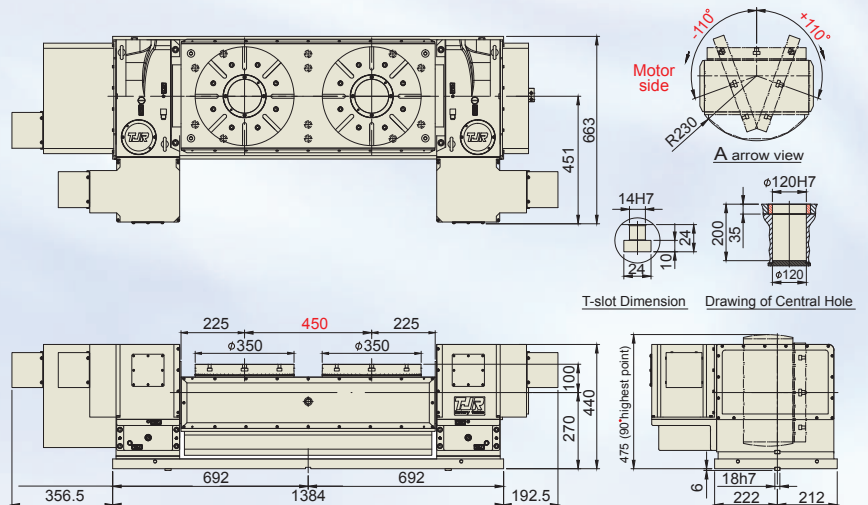
FHR-350F-2W-RC320-2A

HRC-320

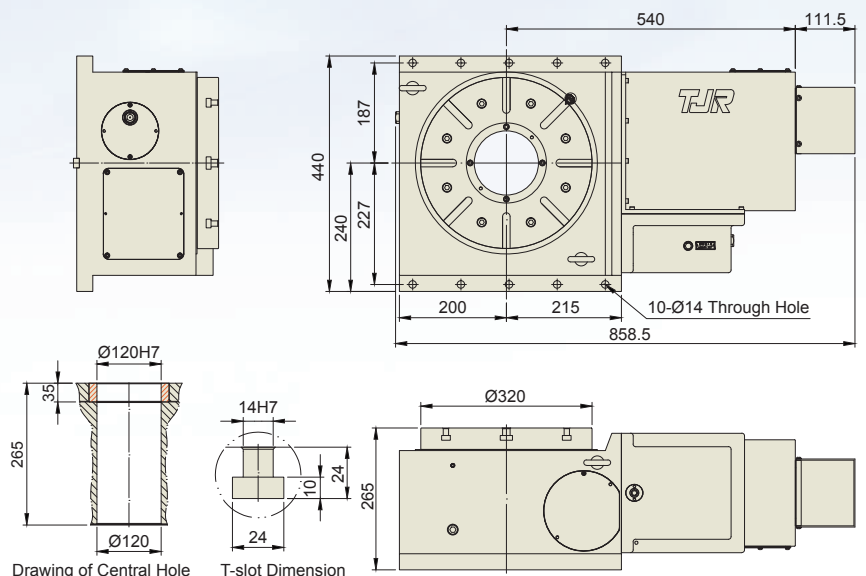
| | | |
|--------------------|-----------------|------------------|
| Ø320 | Ø320 | Ø320 |
| Ø150 | Ø120 x 35 deep | Ø120 x 35 deep |
| Ø120H7 | Ø120H7 | Ø120H7 |
| Ø120 | Ø120 | Ø120 |
| 370 | 265 | 265 |
| 14H7 | - | - |
| 18h7 | 18h7 | 18h7 |
| Rotary axis | Tilt axis ±110° | - |
| Worm & Worm Gear | Roller Gear Cam | Roller Gear Cam |
| 0.001 | 0.001 | 0.001 |
| 20 | 60 | 20 |
| 4 | 8 | 4 |
| 35 | 35 | 35 |
| 115 | 230 | 115 |
| α12is / β22is | α12is x2 | α12i / β22is |
| HF-204 | HF-154 x2 | HF-204 |
| 1FK7083 | 1FK7083 x2 | 1FK7083 |
| - | - | QSY-155B |
| - | - | ECMA-E11830RS |
| - | - | SGM7G-20A |
| 1 : 120 | 1 : 60 | 1 : 90 |
| 25 | 16.6 | 33.3 |
| 23 (single plate) | | 44.8 |
| 150 (single plate) | | 350 (Horizontal) |
| 150 (single plate) | | - |
| 1800 | | 3000 |
| 230 | | 300 |
| 115 | | 115 |
| - | | 77.5 |
| 1080 | | 261 |

FHR-350F-2W-RC320-2A (2 wheel coupled)

Tilt axis : Driven by Roller Gear Cam



HRC-320 (Horizontal)





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*Overwrite the image of
rotary table **speed***

※ If the rotary table driven by worm & gear is needed, please contact us to get the corresponding catalog.

TJR[®]

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