



TJR APP -
Android



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www.tjr.com.tw

Product Code

RC - 170 - H - R - T

Code No. of
Transmission Mechanism Type
RC : Roller Gear Cam
AR : Worm & Worm Gear

Diamentor of
the rotary table
face plate (mm)

Alternative
Hydraulic
Brake
Refer to page2 Table3

Motor mounting
location
Refer to page2 Table2

- R** Right Mount
- L** Left Mount
- B** Back Mount

Transmission
Mechanisms
Material
Refer to page1 Table1

- T** Taiwan-made
- J** Japan-made

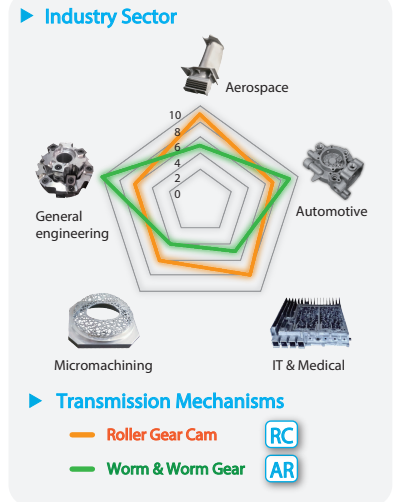


AR-125 ▲

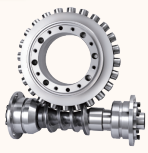


▲ RC-170

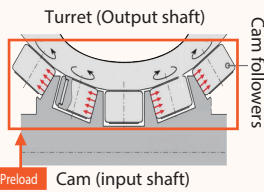
The sales of different models by major industry sector



RC Series



Roller Gear Cam

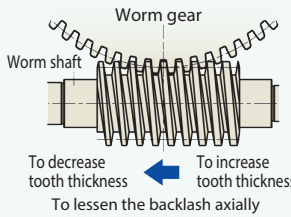


It consists of an input shaft and output turret with embedded roller followers. A cross-roller bearing supports the output turret with minimal run out and transmits power by rolling rather than sliding. Preloaded roller followers contact the input rib surfaces with a wedge-shaped cross section. It can be adjusted by moving the input axis, eliminating backlash completely. Clearly seen for CW and CCW rotation.

AR Series



Worm & Worm Gear



Specially designed double-lead worm & gear with full-depth teeth. The worm gear with a large pitch diameter creates a large engagement area and less pressure on the contact surface, resulting in higher strength. By moving the worm shaft axially, the tooth engagement can be changed successively. As the backlash between worm and gear can be adjusted while keeping them in their proper positions, the ideal tooth engagement is maintained.

Table 1

Model	Ø125mm	AR-125-T	-	-
	Ø170mm	AR-170-T	AR-170-J	RC-170-T

	Worm & Worm Gear		Roller Gear Cam
Transmission Mechanism			
Material	T Taiwan Made Worm wheel : Aluminum Bronze	J Japan Made Worm wheel : Special high tensile brass	Turret, Roller Gear Cam, and Follower : Case hardened alloy steel
	Worm shaft : Case hardened alloy steel		The table runs on a series of rollers, meaning slick rolling surface operation with no backlash and wear.
Compact Footprint	-	-	-
Zero Backlash	-	-	★★★★
Anti-Wear	★	★★	★★★★
Maintenance	★	★	★★
Rotary Speed	★	★	★★
Indexing Precision / Repeatability	★★	★★	★★
Loading capacity	★★★★	★★★★	★★★★
Driving Torque (without Brake)	★★★★	★★★★	★★
Popularity	★★★★	★★★★	★★

Ø125,170mm Models

Specifications



Air brake



Oil brake

Item / Code No.	Unit	ARs -125 R/L/B	AR -170 R/L/B	RC-170 R
Table Diameter	mm	Ø125	Ø170	Ø170
Inner Diameter of Mandrel Sleeve	mm	Ø35H7	Ø40H7	Ø40H7
Diameter of Center Through Hole	mm	Ø25 Blind hole Ø25 x 152 Deep ^{*1}	Ø40 Blind hole Ø40 x 152 Deep ^{*1}	Ø40
Center Height (Vertical)	mm	110	135	135
Table Height (Horizontal)	mm	152 NA ^{*1}	152 NA ^{*1}	152
Table T-slot Width	mm	12H7	12H7	12H7
Guide Block Width	mm	14h7	18h7	18h7
Min. Increment	deg.	0.001	0.001	0.001
Indexing Precision	sec.	40	20	30
Repeatability	sec.	6	6	6
Clamping System	kgf/cm ²	Pne. 6	Pne. 6 / Hyd. 35	Pne. 6 / Hyd. 35
Clamping Torque	kgf-m	13	31 / 55	31 / 50
Servo Motor Model	FANUC	Taper shaft	aiS4 / βis4	aiF8 / βis8
	MITSUBISHI	Taper / Straight shaft	HG -75 / 105	HG -54 / 104
	SIEMENS	Straight shaft	1FK7042	1FK7060
	HEIDENHAIN	Straight shaft	QSY-96A	QSY-116C
Speed Reduction Ratio	-	1 : 60	1 : 90	1 : 36
Max. Rotation Rate of Table (Calculate with Fanuc a Motor)	min-1	33.3	44.4 [33.3]	83.3
Allowable inertia load capacity (Horizontal)	kg-m ²	0.28	0.63	0.63
Allowable Workpiece Load	Vertical	kg	50	75
	With Tailstock	kg	100	150
	Horizontal	kg	100 NA ^{*1}	150 NA ^{*1}
Allowable Thrust Load (with Rotary Table Clamping)	F	kgf	1000	1450
	FxL	kgf-m	45	110
	FxL	kgf-m	13	31
Driving Torque	kgf-m	9	29	37
Net Weight (Servo motor excluded)	kg	34 44 ^{*1}	55 60 ^{*1}	44
Optional Rotary Joint	Available Number of Ports	2,4	2,4	2,4

*1: When the motor mount location is BACK.

Table 2

Positioning	Code	Right Mount	Left Mount	Back Mount
Diagram				
VERTICAL		✓	✓	✓
HORIZONTAL		✓	✓	✗

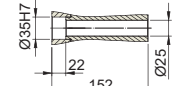
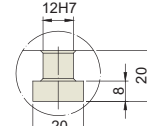
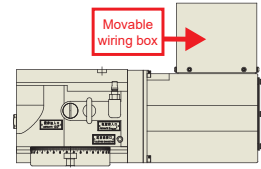
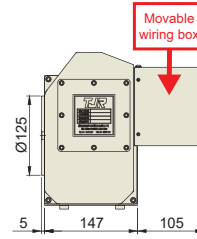
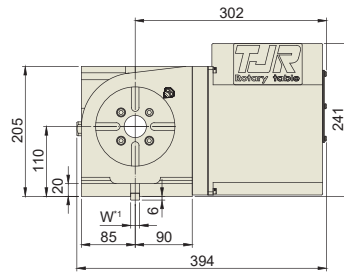
Model Name by brake mechanism

Table 3

Brake type	Faceplate size	Ø125mm	Ø170mm	
	Air brake		AR-125	AR-170
Oil brake		NA	AR-170H	RC-170H

Ø125mm Model Dimensions

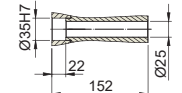
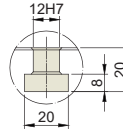
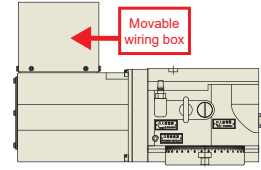
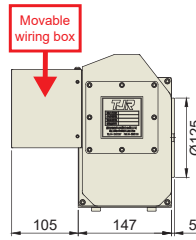
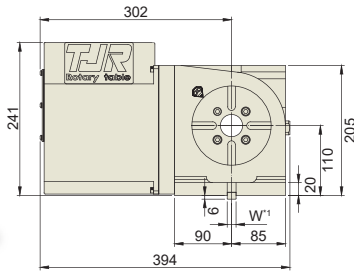
AR-125



T-Slot Dimension(4:1)

Drawing of Central Hole

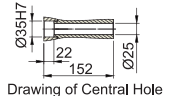
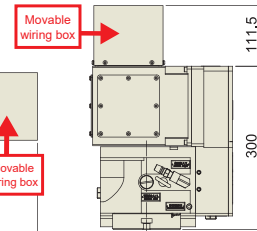
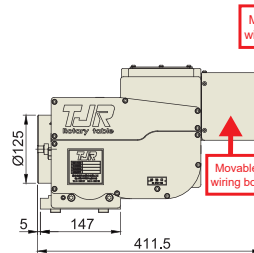
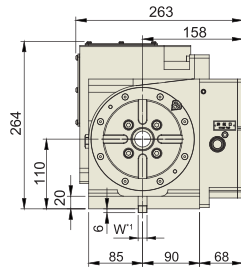
AR-125



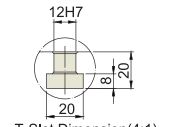
T-Slot Dimension(4:1)

Drawing of Central Hole

AR-125



Drawing of Central Hole



T-Slot Dimension(4:1)

*1: The Key size can be changed based on the T-slot of work table.

★ Air purge function is provided inside the motor cover as standard.

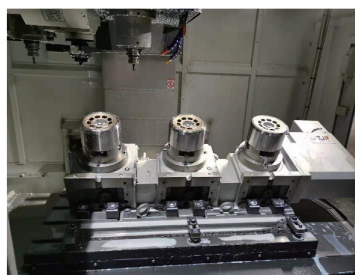
★ External dimensions depend on the type of the servo motor. Indicated dimensions are in case of FANUC. Please contact us for CAD files.



▲ AR-125 + 5C



▲ AR-125-2W + TTJ-125



▲ AR-125-3W

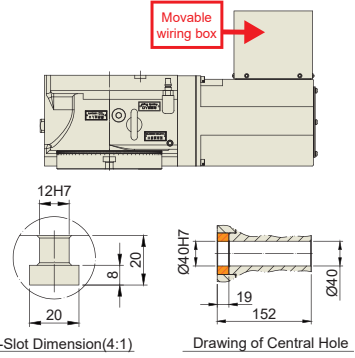
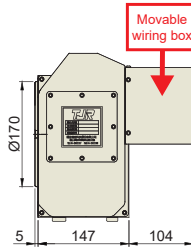
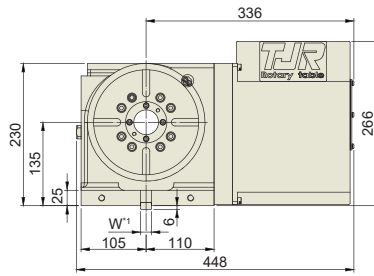


▲ AR-125-4W + ATTJ-125

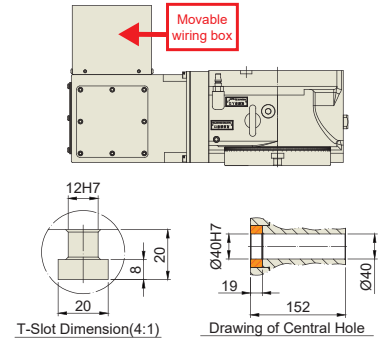
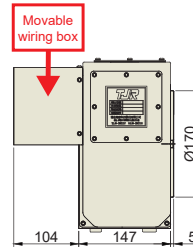
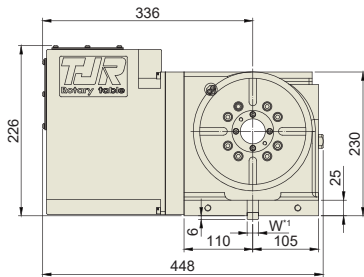
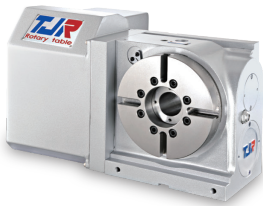
Ø170mm Model Dimensions



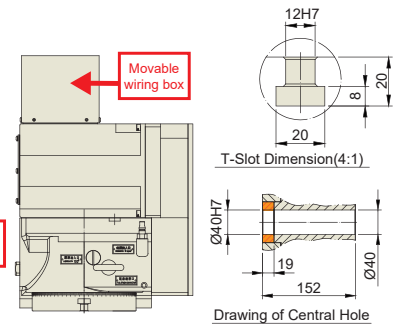
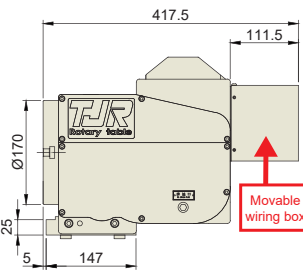
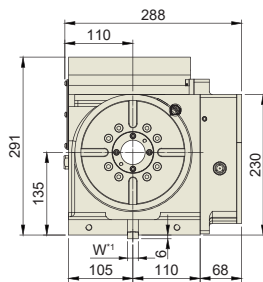
AR-170



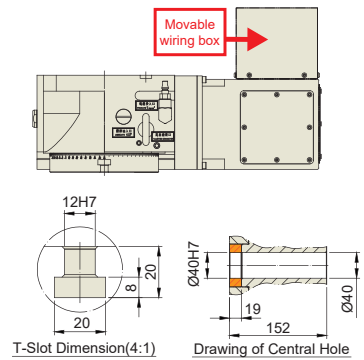
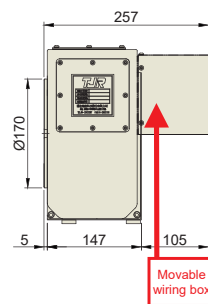
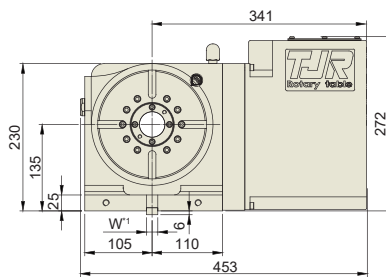
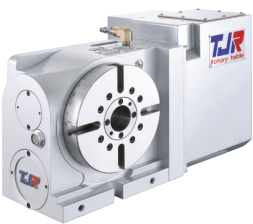
AR-170



AR-170



RC-170



*1: The Guide Key size can be changed based on the T-slot of work table.

★ Air purge function is provided inside the motor cover as standard.

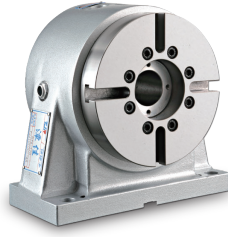
★ External dimensions depend on the type of the servo motor. Indicated dimensions are in case of FANUC. Please contact us for CAD files.



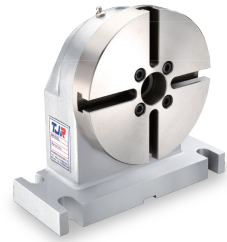
Support Table & Corresponding Accessories



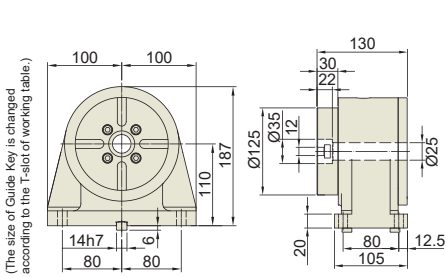
RTA-125 Air brake



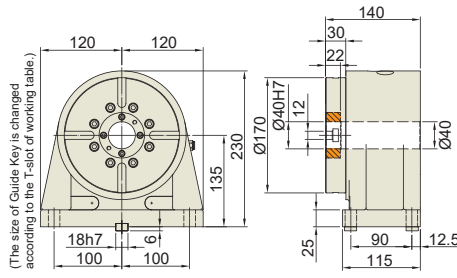
RTA-170 Air brake Oil brake



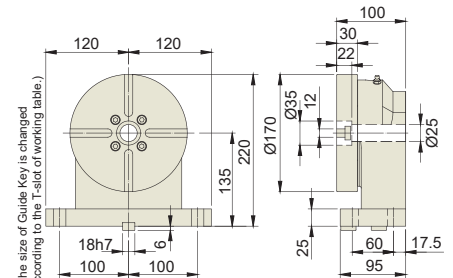
RT-170F No Brake



Weight :18kg

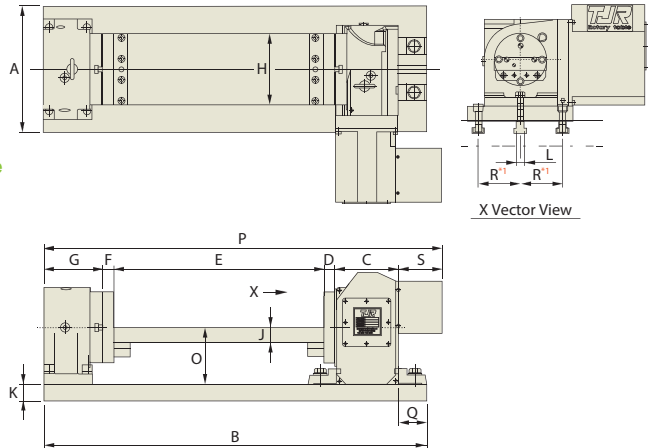
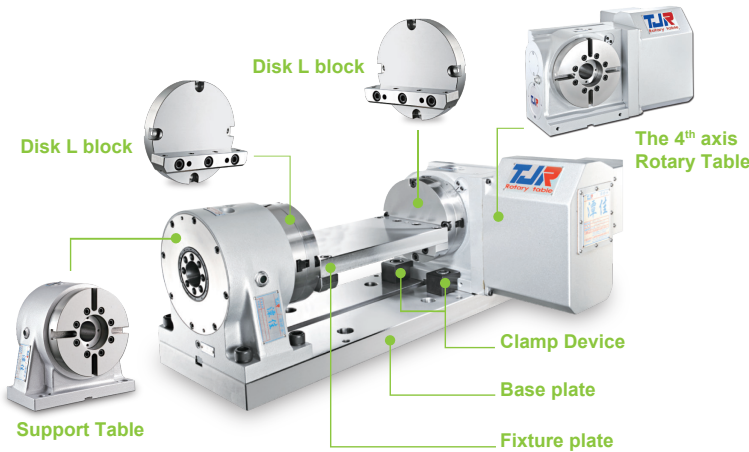


Weight :29kg



Weight :18kg

Trunnion Application



Rotary Table Model	Tailstock Model	A	B	C	D	E	F	G	H	J	K	L	N	O	P	Q	S
AR-125	RTA-125	250	725	152	20	400	20	130	125	30	35	14	14	115	827	2	105
AR-170 RC-170	RTA-170	300	911	152	25	500	25	140	170	35	40	18	18	135	947	69	105

*1: "R" depends on the size of machine worktable.

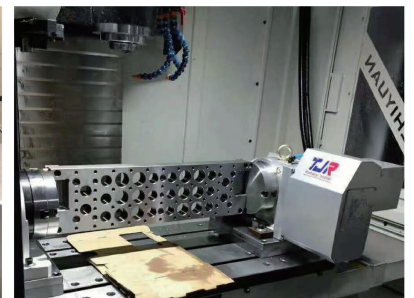
★ A suitable raiser for either rotary table or manual tailstock can be customized to increase the center height.



▲ AR-125 + RTA-125

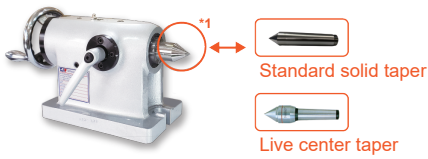


▲ AR-170 + RTA-170



▲ RC-170 + RTA-170

Manual Tailstock & Corresponding Accessories



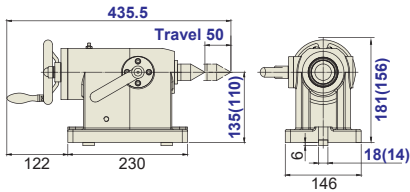
TTJ-125/170



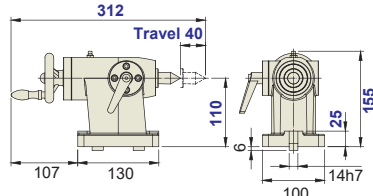
TTJ-125A



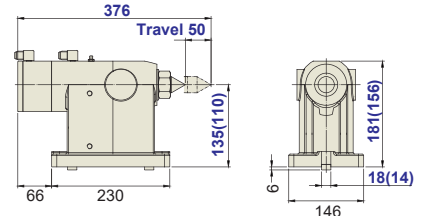
ATTJ-125/170
(With Pneumatic switching valve)



Weight : 23kg(21.5kg)



Weight : 8.5kg



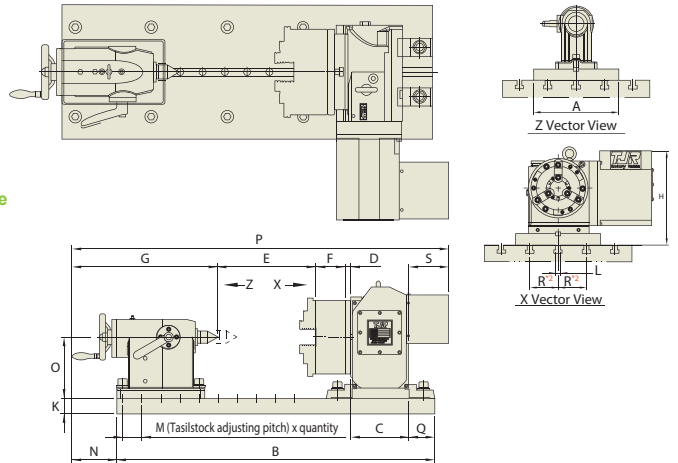
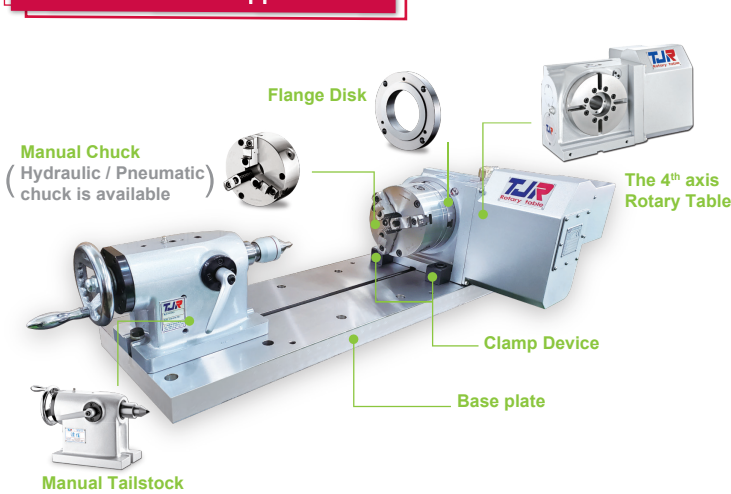
Weight : 23kg(21kg)

* (): the dimension of Model TTJ-125

* (): the dimension of Model ATTJ-125

*1: The taper is replaceable. The standard one is a solid taper. Moreover, the live center taper can be optional.

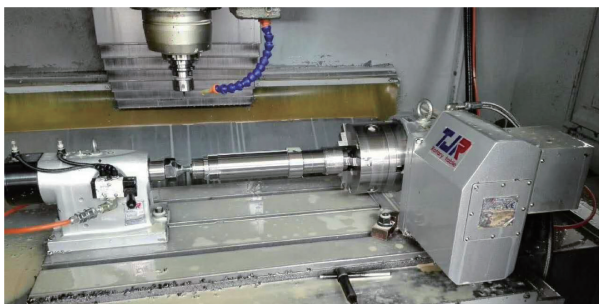
Chuck and Tailstock Application



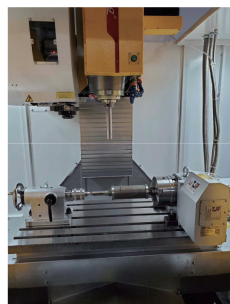
Rotary Table Model	Tailstock Model	Chuck Model	A	B	C	D	E	F	G	K	N	O	P	Q	S
AR-125	TTJ-125	SC-4	250	725	152	16	234.5	60	382.5	35	122	110	950	2	105
		SC-5	250	725	152	16	234.5	60	382.5	35	122	110	798	2	105
AR-170 RC-170	TTJ-170	SK-6	300	911	152	16	346.5	67	382.5	40	122	135	1069	69	105
		SK-7	300	911	152	16	337	76.5	382.5	40	122	135	917	69	105
		SK-8	300	911	152	16	337	76.5	382.5	40	122	135	917	69	105

*2: "R" depends on the size of machine worktable.

★A suitable raiser for either rotary table or manual tailstock can be customized to increase the center height.



▲ RC-170 + ATTJ-170



▲ AR-170 + TTJ-170



▲ AR-170 + TTJ-170