

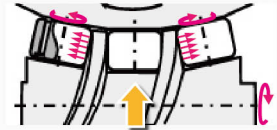


The Features of Roller Drive system



- 01 Zero backlash
- 02 Wear-free durability
- 03 High productivity
due to lower speed reduction ratio
- 04 High torque capacity
- 05 Low Maintenance

- Over 90% of conduction efficiency.
- Reduce thermal displacement and non-performing rates, even at high speeds.



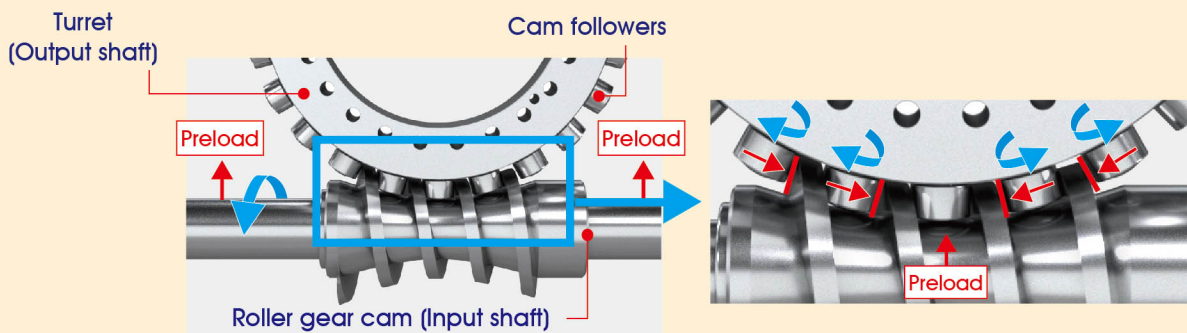
- Preload + Rolling contact**
- Achieves Zero-backlash and long life



- Shock resistant and high performance cam followers.

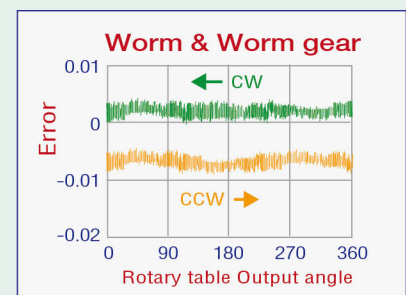
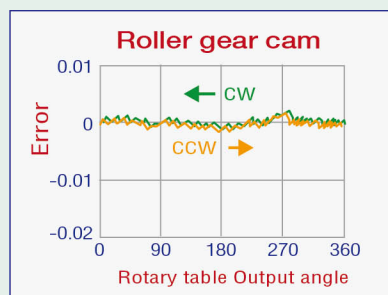
■ The Core of TJR RC Series Roller-Drive CNC Rotary Table Exclusive : Zero-Backlash Mechanism

By preloading the input and output shafts beforehand, the four cam followers can be always kept in contact with the cam surface, which eliminates backlash completely and provides high rigidity. TJR RC series roller gear cam rotary table with proprietary adjustment ensures the optimum preload. The cam followers planted in the turret employ internal roller bearings which can transmit the motor torque efficiently while rotating. Besides, the cam followers can be rotated at low torque for a long term. without wear and adjustment.



■ High accurate continuous cutting

Backlash can be eliminated with preloading the cam followers. Even machining with the turning direction in reverse will not adversely affect the machining surface.



Roller Gear Cam RC Series



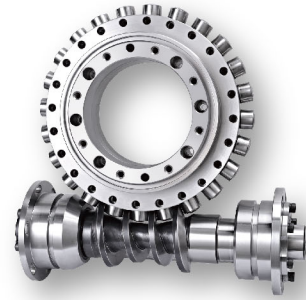
Product lineup

RC Heavy duty & versatile model (Left / Right)



Table face plate

- Ø170
- Ø210
- Ø255
- Ø320
- Ø400



Select Accessories

R
Right hand

Right Side Motor

N
Right hand

Right Side Motor with sheet metal cover reduction

L
Left hand

Left Side Motor

Use
radial & axial bearings

→

Support Table Trunnion application with RC-170R and a Support Table.

Tailstock Scroll Chuck Adapter

→

Rotary Joint A rotary joint with at least 6 port is available for RC series.

Applications

- ◆ **Automotive parts**
High-speed positioning which reduces non-cutting time.

- ◆ **Cutting Tool Grinding**
Precision improved by continuous zero backlash machining.

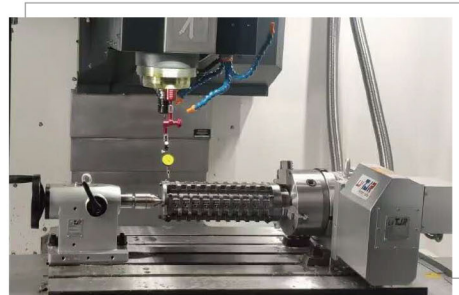
- ◆ **Molding parts**
High speed & accurate continuous cutting.

- ◆ **Turbine blade**
Fast-accelerated driven machining.

Example



▲ RC-170R + RTA-170



▲ RC-210R + TTJ-210

Roller Gear Cam RC Series



Specifications

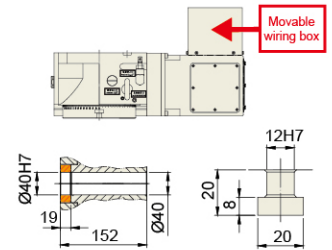
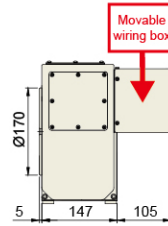
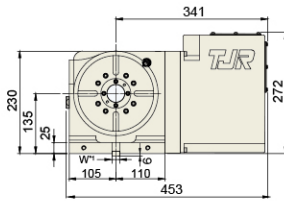


Item / Code No.		Unit	RC-170R	RC-210R/L	RC-255R/N	RC-320R/N/L	RC-400R/N
Table Diameter		mm	Ø170	Ø210	Ø255	Ø320	Ø400
Inner Diameter of Mandrel Sleeve		mm	Ø40H7	Ø40H7	Ø80H7	Ø120H7x35 deep	Ø120H7
Diameter of Center Through Hole		mm	Ø40	Ø40	Ø80 Big Bore	Ø105 Big Bore	Ø120 Big Bore
Center Height (Vertical)		mm	135	160	160	210	255
Table Height (Horizontal)		mm	152	152	200	235	250
Table T-slot Width		mm	12H7	12H7	12H7	14H7	14H7
Guide Block Width		mm	18h7	18h7	18h7	18h7	18h7
Min. Increment		deg.	0.001	0.001	0.001	0.001	0.001
Indexing Precision		sec.	30	30	20	20	20
Repeatability		sec.	8	8	6	6	6
Clamping System (Pneumatic / Hydraulic)		kgf/cm ²	Pne.6	Pne.6 / Hyd.35	Hyd.35	Hyd.35	Hyd.35
Clamping Torque		kgf·m	31	31 / 50	70	115	200
Servo Motor Model	FANUC	Taper shaft	αiF8 / βis8	αiF8 / βis8	αiF8 / βis12 (Taper)	αiF12 / βis22 (Straight)	αiF12 / βis22 (Straight)
	MITSUBISHI	Taper/Straight shaft	HG/HF-104 / 154	HG/HF-104 / 154	HG/HF-154	HG/HF-204	HG/HF-204 (Straight)
	SIEMENS	Straight shaft	1FK7060	1FK7060	1FK7063	1FK7083	1FK7083
	HEIDENHAIN	Straight shaft	QSY-116C	QSY-116C	QSY-130C	QSY-155B	QSY-155B
Speed Reduction Ratio		-	1 : 36	1 : 36	1 : 60	1 : 90	1 : 90
Max. Rotation Rate of Table (Calculate with FANUC αMotor)		r.p.m	83.3	83.3	50	33.3	33.3
Allowable Inertia Load Capacity (Horizontal)		kg·cm·sec ²	5.4	8.3	20.3	44.8	100
Allowable Workpiece Load (dynamic)	Vertical	kg	75	75	100	150	200
	with Tailstock	kg	150	150	250	350	500
	Horizontal	kg	150	150	250	350	500
Allowable Load (with clamping)	F	kgf	1450	1450	2000	3000	4000
	FxL	kgf·m	110	110	150	300	400
	FxL	kgf·m	31	31 / 50	70	115	200
Driving Torque		kgf·m	37	37	55	107	140
Net Weight (Servo motor excluded)		kg	44	52	110	187	-
Optional Rotary Joint 		Available Number of Ports	2,4	2,4	2,4,6,8	2,4,6,8,12	2,4,6,8,12

Code No.	Motor Mounting Location	Diagram	 VERTICAL	 HORIZONTAL
R	Right Mount	 Right hand	✓	✓
L	Left Mount	 Left hand	✓	✓
N	Right Mount with sheet metal cover reduction	 Right hand	✓	✗

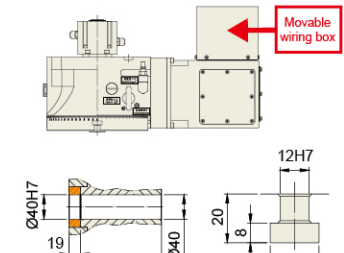
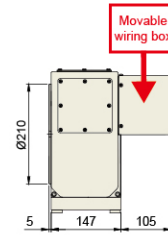
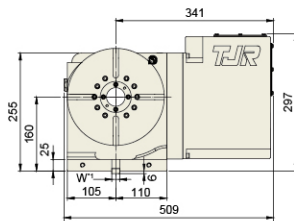
Roller Gear Cam RC Series

RC-170 **R** Right hand



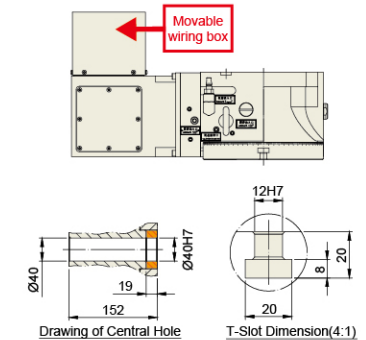
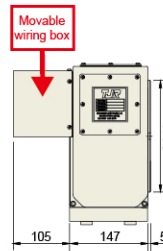
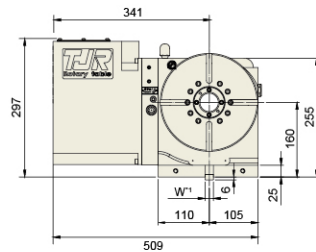
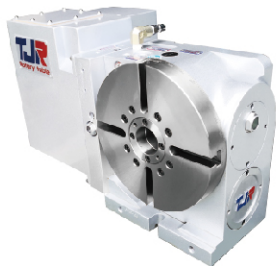
Drawing of Central Hole T-slot Dimension

RC-210 **R** Right hand



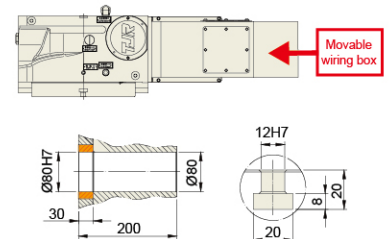
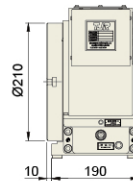
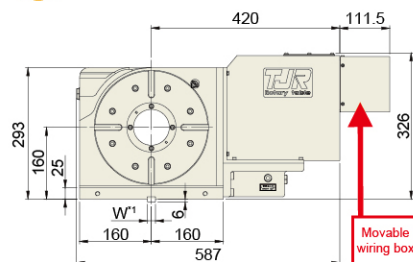
Drawing of Central Hole T-slot Dimension

RC-210 **L** Left hand



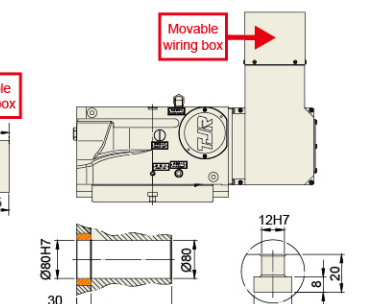
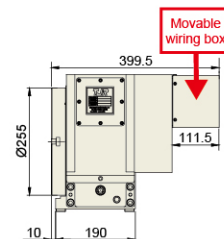
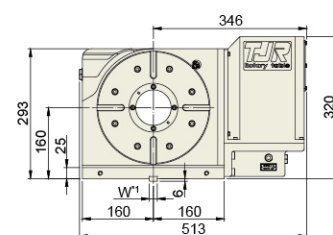
Drawing of Central Hole T-Slot Dimension(4:1)

RC-255 **R** Right hand



Drawing of Central Hole T-Slot Dimension

RC-255 **N** Right hand



Drawing of Central Hole T-Slot Dimension(4:1)

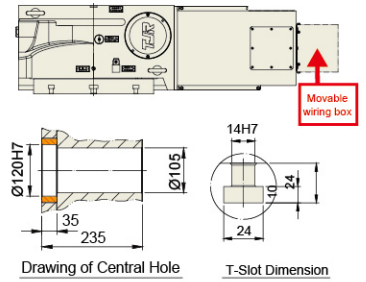
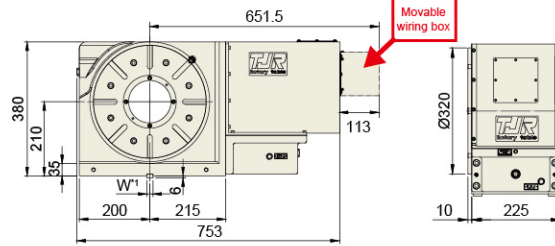
*1 : The Guide Key size can be changed based on the T-slot of work table.

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

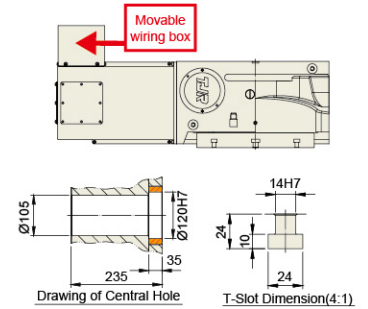
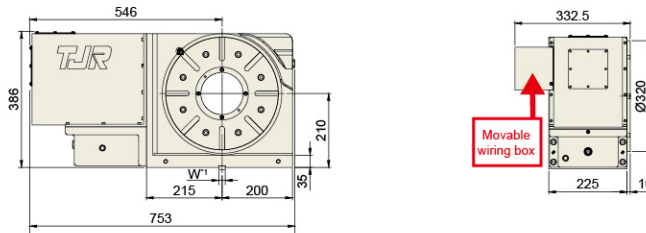
★ External dimensions depend on the type of the servo motor. Indicated dimensions are in case of FANUC. Please contact us for CAD files.

Roller Gear Cam RC Series

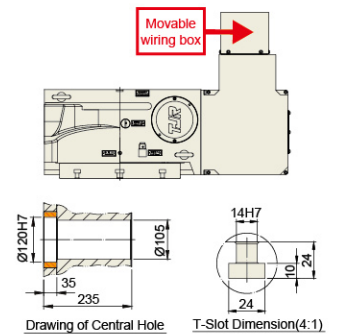
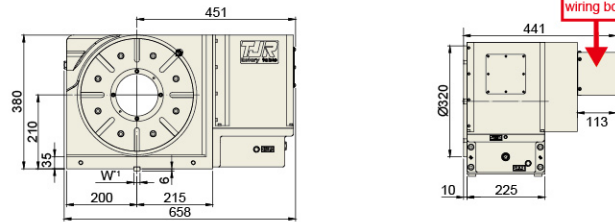
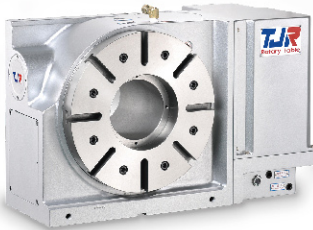
RC-320 **R** Right hand



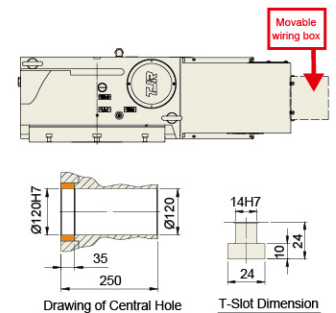
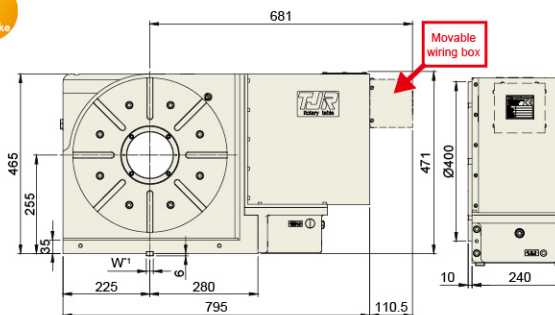
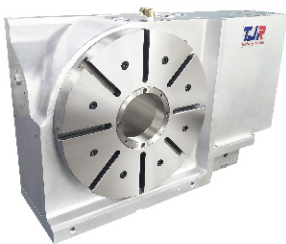
RC-320 **L** Left hand



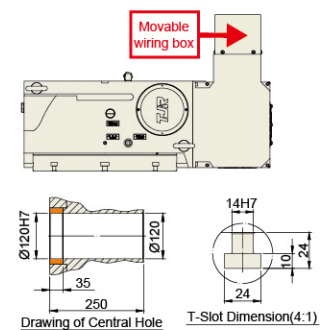
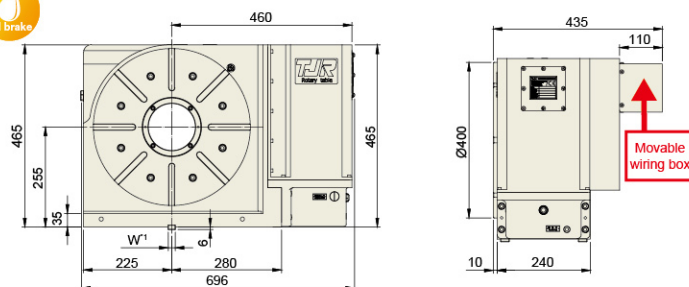
RC-320 **N** Right hand



RC-400 **R** Right hand



RC-400 **N** Right hand

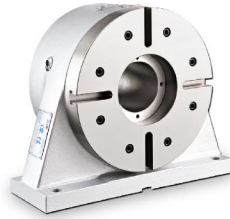


*1 : The Guide Key size can be changed based on the T-slot of work table.

★ 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.

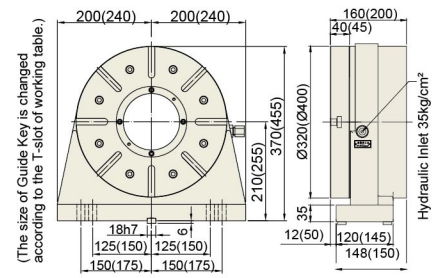
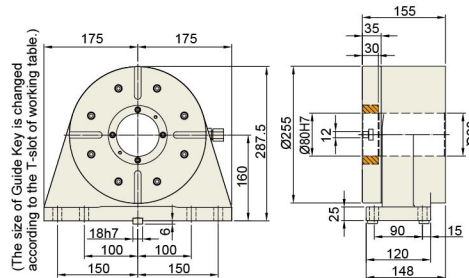
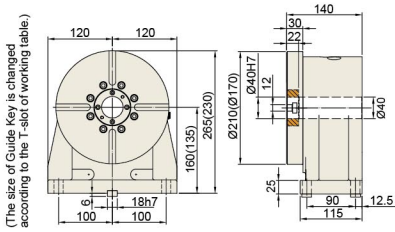
Support Table & Corresponding Accessories



RTA-170/210 Air brake Oil brake

RTH-255 Oil brake

RTH-320/400 Oil brake

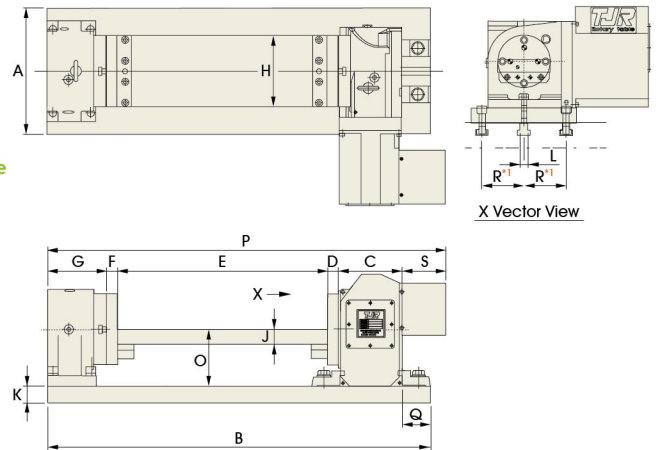
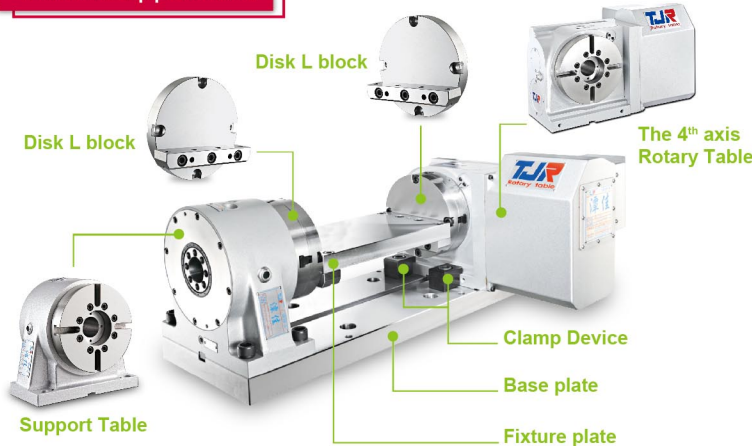


*():The dimension of Model RTA-170 **Weight : 35kg(29kg)**

Weight : 57kg

*():The dimension of Model RTH400 **Weight : 83kg(165kg)**

Trunnion Application



Rotary Table Model	Tailstock Model	A	B	C	D	E	F	G	H	J	K	L	N	O	P	Q	S
RC-170	RTA-170	300	911	152	25	500	30	140	170	35	40	18	18	135	947	69	106
RC-210	RTA-210	300	1011	152	25	600	30	140	200	40	40	18	18	160	1047	69	106
RC-255	RTH-255	350	1148	200	25	700	35	155	250	45	40	18	18	160	1305	69	201
RC-320	RTH-320	400	1297	235	30	800	40	160	300	45	40	18	18	210	1460	69	206
RC-400	RTH-400A	450	1455	250	30	900	45	175	400	45	40	18	18	255	1572	69	188

*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.



▲ RC-170 + RTA-170

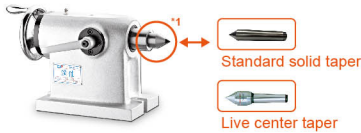


▲ RC-255 + RTH-255



▲ RC-320 + RTH-320

Manual Tailstock & Corresponding Accessories



TJJ-170/210/255



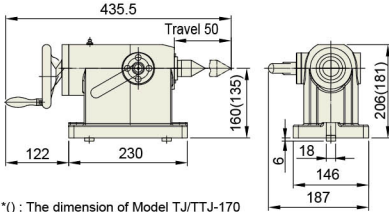
TJJ-320/400



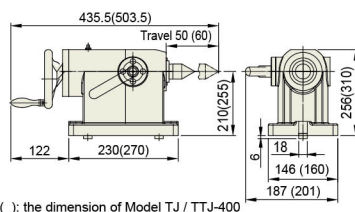
ATTJ-170/210
HTTJ-210/255
(With Pneumatic switching valve)



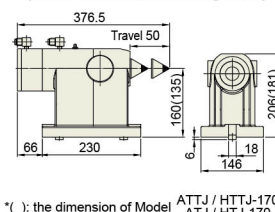
HTTJ-320/400
(With Hydraulic switching valve)



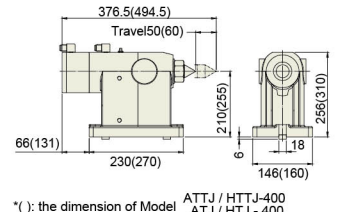
*(): The dimension of Model TJJ/TTJ-170
Weight : 25kg(23kg)



*(): the dimension of Model TJJ / TTJ-400
Weight : 29kg(48kg)



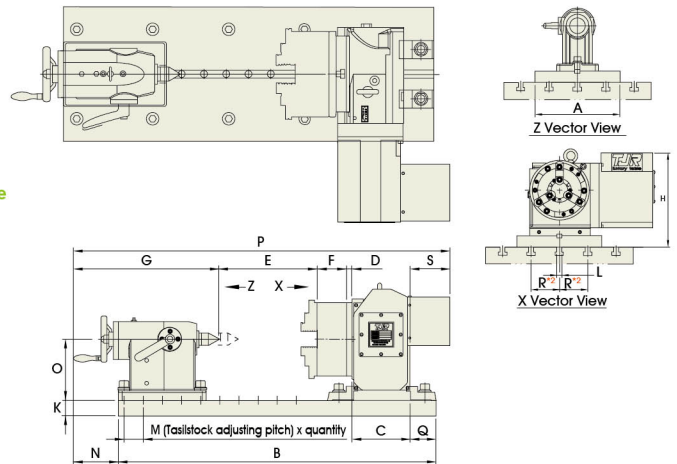
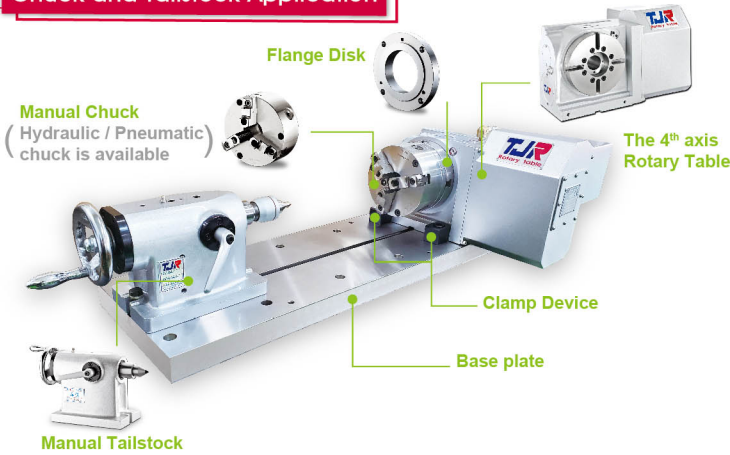
*(): the dimension of Model ATTJ / HTTJ-170
ATJ / HTJ-170
Weight : 25kg(23kg)



*(): the dimension of Model ATTJ / HTTJ-400
ATJ / HTJ - 400
Weight : 29kg(50kg)

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

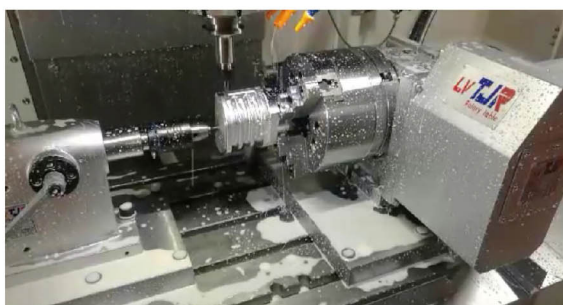
Chuck and Tailstock Application



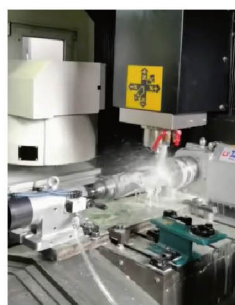
Rotary Table Model	Tailstock Model	Chuck Model	A	B	C	D	E	F	G	K	N	O	P	Q	S
RC-170	TTJ-170	SK-6	300	911	152	16	336	67	381	40	110	135	1058	69	106
		SK-7	300	911	152	14	329	76.5	381	40	110	135	1058	69	106
		SK-8	300	911	152	14	329	76.5	381	40	110	135	1058	69	106
RC-210	TTJ-210	SK-7	300	1011	152	14	429	76.5	381	40	110	160	1158	69	106
		SK-8	300	1011	152	14	429	76.5	381	40	110	160	1158	69	106
RC-255	TTJ-255	SK-7	350	1148	200	20	512	76.5	381	40	110	160	1390	69	201
		SK-8	350	1148	200	20	512	76.5	381	40	110	160	1390	69	201
		SK-9	350	1148	200	20	504	84	381	40	110	160	1390	69	201
		SK-10	350	1148	200	20	501	87	381	40	110	160	1390	69	201
RC-320	TTJ-320	SK-9	400	1297	235	20	618	84	381	40	110	210	1544	69	260
		SK-10	400	1297	235	25	610	87	381	40	110	210	1544	69	206
RC-400	TTJ-400	SK-12	450	1455	250	25	680	96	457	40	122	255	1696	69	188
		SK-16	450	1455	250	28	651	122	457	40	122	255	1696	69	188

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

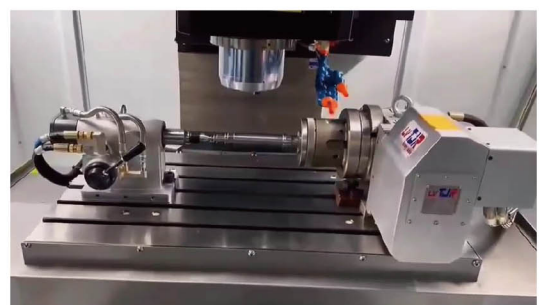
★ A suitable raiser for either rotary table or manual tailstock can be customized to increase the center height.



▲ RC-170 + TTJ-170



▲ RC-210 + ATTJ-210



▲ RC-210 + HTTJ-210