



TJR APP



www.tjr.com.tw

Product Code

RC - **320** - **R** - **T**

Code No. of Transmission Mechanism Type

RC : Roller Gear Cam
 HR : Worm & Worm Gear

Diameter of the rotary table face plate (mm)

Motor mounting location Refer to page2 Table2

R Right Mount **B** Back Mount
L Left Mount **N** Right Mount with sheet metal cover reduction

Transmission Mechanisms Material Refer to page1 Table1

T Taiwan-made
J Japan-made



RC-320 ▲

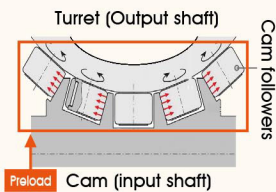


▲ RC-400

RC Series



Roller Gear Cam

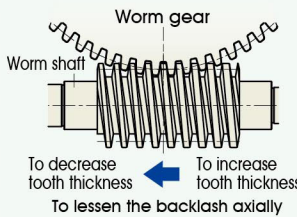


It consists of an input shaft and output turret with embedded roller followers. A cross-roller bearing supports the output turret with minimal run out and transmits power by rolling rather than sliding. Preloaded roller followers contact the input rib surfaces with a wedge-shaped cross section. It can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

HR 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.

The sales of different models by major industry sector

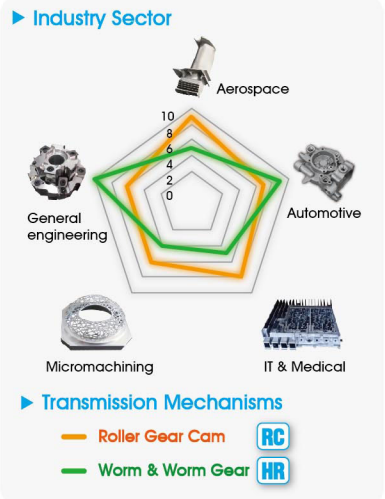


Table 1

Model	Ø320mm	HR-320-T	HR-320-J	RC-320-J
	Ø400mm	HR-400-T	HR-400-J	RC-400-J

Transmission Mechanism	Worm & Worm Gear		Roller Gear Cam
Material	T Taiwan Made Worm wheel : Aluminum Bronze	J Japan Made Worm wheel : Special high tensile brass	J Japan Made Turret, Roller Gear Cam, and Follower : Case hardened alloy steel
	Worm shaft : Case hardened alloy steel		
	The combination of iron and brass produces less friction. A more effective transfer of the motor torque is achieved.		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	★★★★	★★★★	★★

Ø320,400mm Models

Specifications



Item / Code No.	Unit	HR-320 R/N/B	RC-320 R/L/N	HR-400 R/N/B	RC-400 R/N	
Faceplate diameter	mm	Ø320	Ø320	Ø400	Ø400	
Inner Diameter of Mandrel Sleeve	mm	Ø120H7	Ø120H7 x 35 deep	Ø120H7	Ø120H7	
Diameter of Center Through Hole	mm	Ø120 Blind hole Ø120 x 217 Deep*1	Ø105	Ø120 or Ø150 Blind hole Ø120 x 220 Deep*1	Ø120	
Center Height (Vertical)	mm	210 255 *1	210	255	155	
Table Height (Horizontal)	mm	235 NA *1	235	250 NA *1	250	
Table T-slot Width	mm	14H7	14H7	14H7	14H7	
Guide Block Width	mm	18h7	18h7	18h7	18h7	
Min. Increment	deg.	0.001	0.001	0.001	0.001	
Indexing Precision	sec.	15	20	15	20	
Repeatability	sec.	6	6	6	6	
Clamping System (Hydraulic)	kgf/cm ²	35	35	35	35	
Clamping Torque	kgf·m	115	115	200	200	
Servo Motor Model	FANUC	Taper shaft	aiF12/βis22	aiF12/βis22	aiF12/βis22	aiF12/βis22
	MITSUBISHI	Taper / Straight shaft	HG/HF-204	HG/HF-204	HG/HF-204	HG/HF-204
	SIEMENS	Straight shaft	1FK7083	1FK7083	1FK7083	1FK7083
	HEIDENHAIN	Straight shaft	QSY-155B	QSY-155B	QSY-155B	QSY-155B
Speed Reduction Ratio	-	1 : 120 1 : 150 *1	1 : 90	1 : 120	1 : 90	
Max. Rotation Rate of Table (Calculate with Fanuc a Motor)	r.p.m	25	33.3	25	33.3	
Allowable inertia load capacity (Horizontal)	kg·cm·sec ²	44.8 NA *1	44.8	100 NA *1	100	
Allowable Workpiece Load	Vertical	kg	150	150	200	200
	With Tailstock	kg	350	350	500	500
	Horizontal	kg	350 NA *1	350	500 NA *1	500
Allowable Thrust Load (with Rotary Table Clamping)	F	kgf	3000	3000	4000	4000
	FxL	kgf·m	300	300	400	400
	FxL	kgf·m	115	115	200	200
Driving Torque	kgf·m	80	107	170	140	
Net Weight (Servo motor excluded)	kg	204	187	286	-	
Optional Rotary Joint 	Available Number of Ports	2.4.6.8.12	2.4.6.8.12	2.4.6.8.12	2.4.6.8.12	

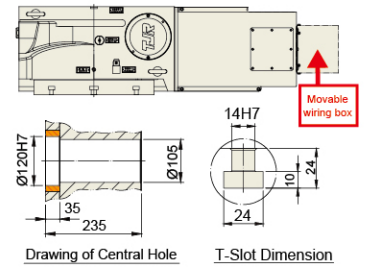
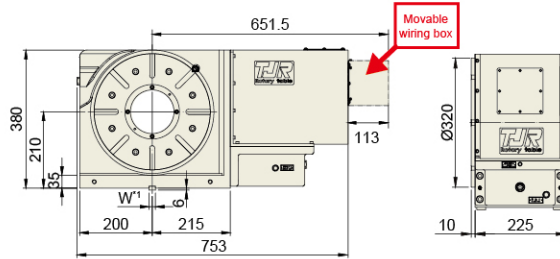
*1: When the motor mount location is BACK.

Table 2

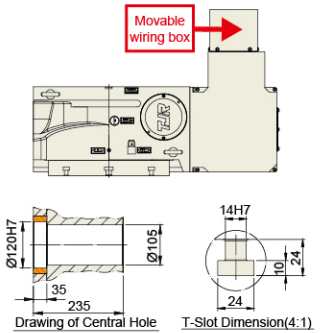
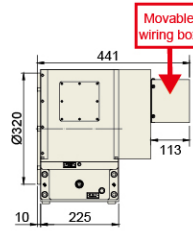
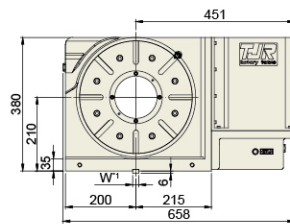
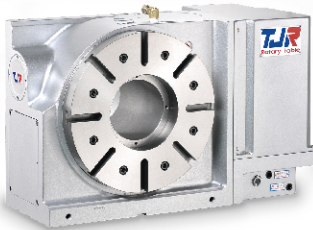
Positioning	Code	Right Mount	Left Mount	Right Mount with sheet metal cover reduction	Back Mount
Diagram					
VERTICAL 		✓	✓	✓	✓
HORIZONTAL 		✓	✓	✗	✗

Ø320mm Model Dimensions

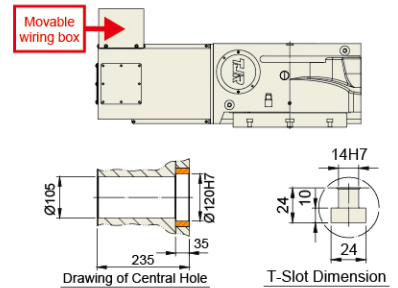
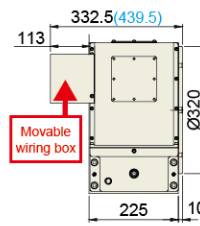
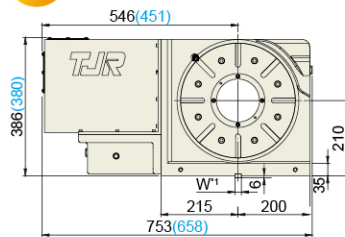
RC-320 **R** Right Hand



RC-320 **N** Right Hand

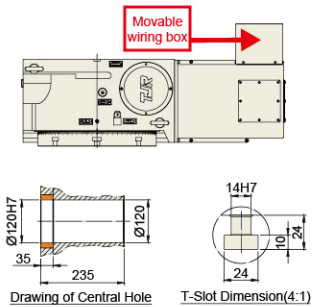
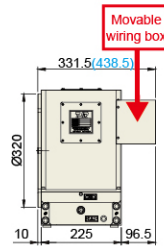
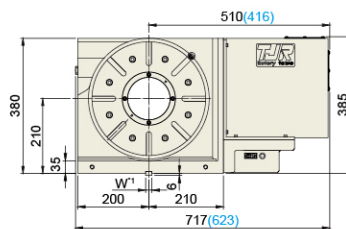


RC-320 **L** Left Hand **N** Right Hand



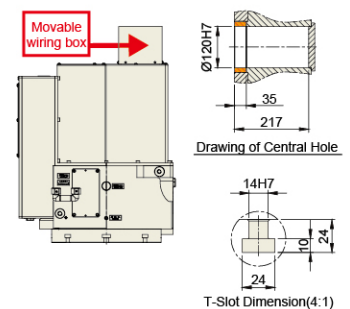
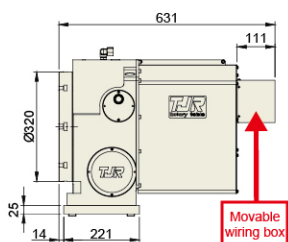
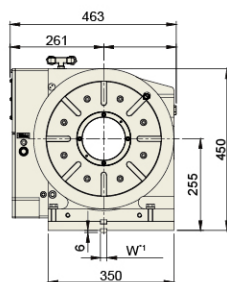
(N): When the sheet metal cover is reduced.

HR-320 **R** Right Hand **N** Right Hand



(N): When the sheet metal cover is reduced.

HR-320 **B** Back Side



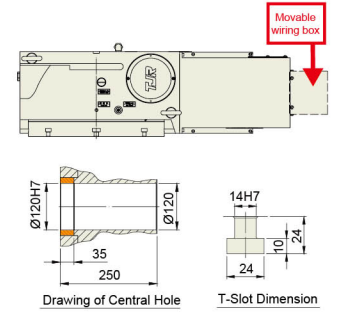
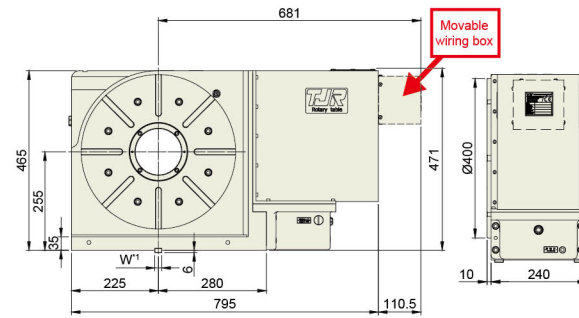
*1: The Guide Key size can be changed based on the T-slot of work table.

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

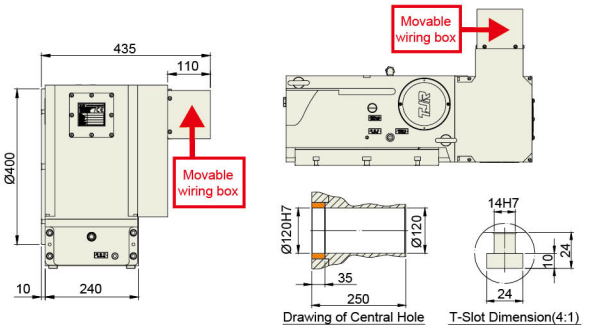
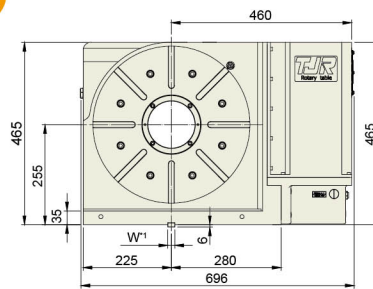
★ External dimensions depend on the type of the servo motor. Indicated dimensions are in case of FANUC. Please contact us for CAD files.

Ø400mm Model Dimensions

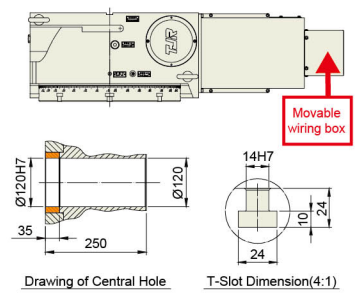
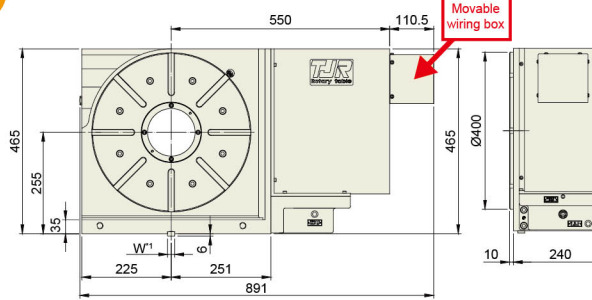
RC-400 R Right Hand



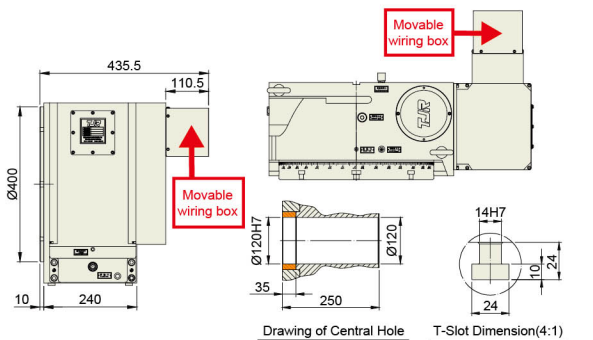
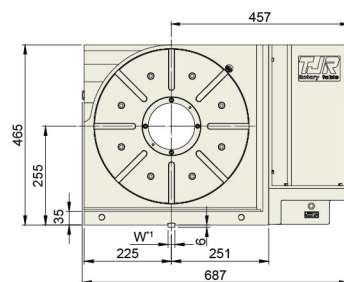
RC-400 N Right Hand



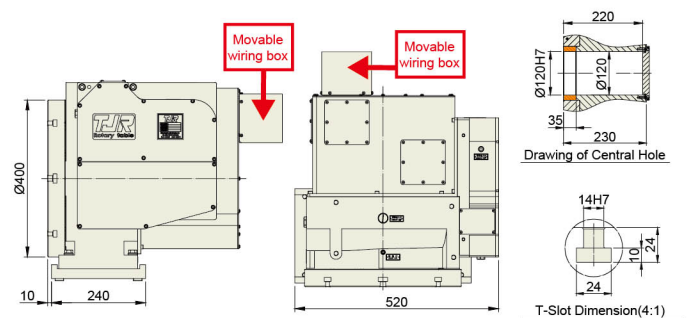
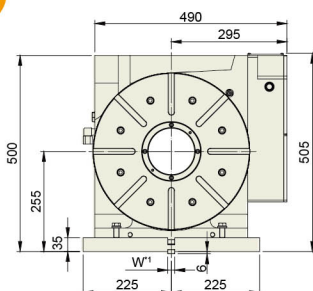
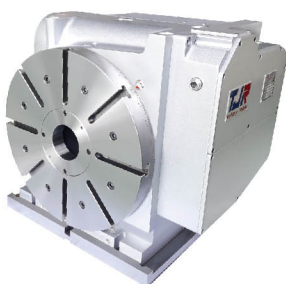
HR-400 R Right Hand



HR-400 N Right Hand



HR-400 B Back Side

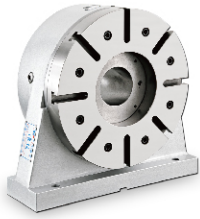


*1: The Guide Key size can be changed based on the T-slot of work table.

★ 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



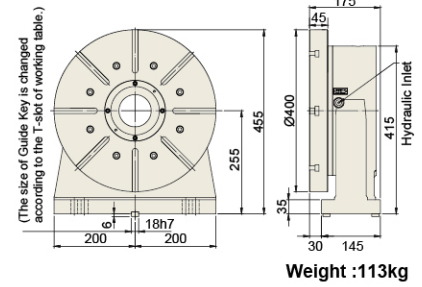
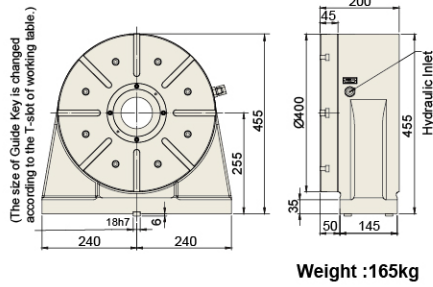
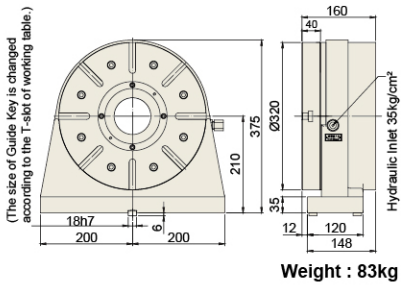
RTH-320 Oil brake



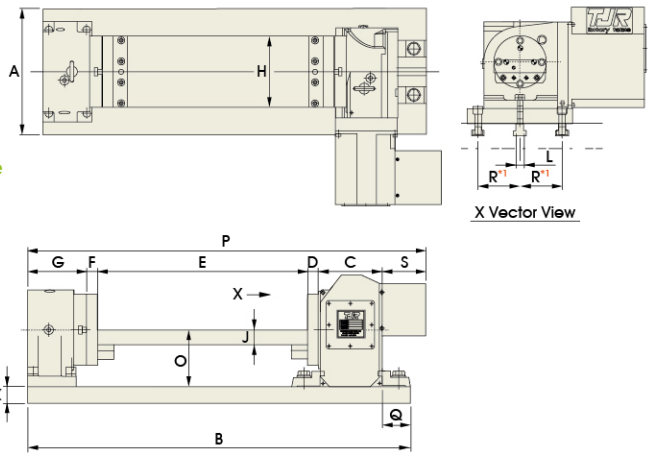
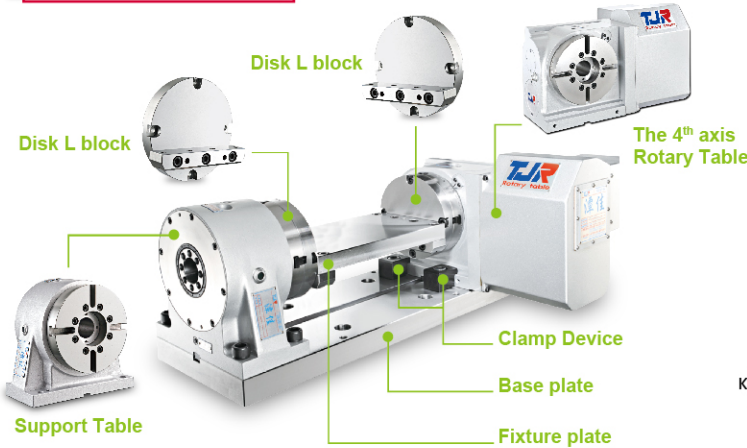
RTH-400 Oil brake



RTH-400A Oil brake

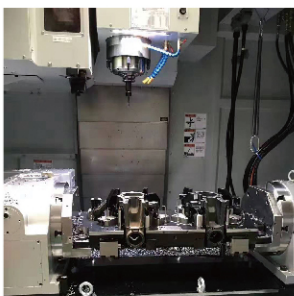


Trunnion Application



Rotary Table Model	Tailstock Model	A	B	C	D	E	F	G	H	J	K	L	N	O	P	Q	S
HR-320 RC-320	RTH-320	400	1297	235	30	800	40	160	300	45	40	18	18	210	1460	69	206
HR-400 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.



▲ HR-320 + RTH-320

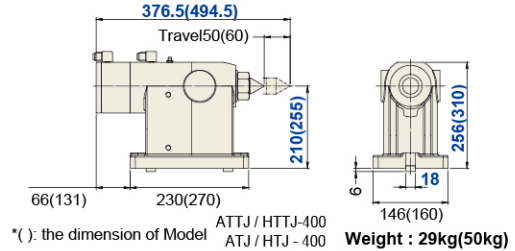
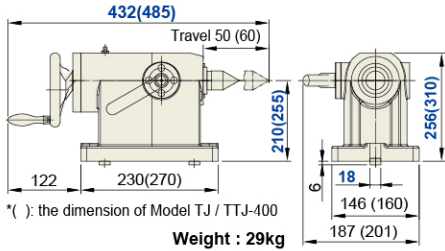
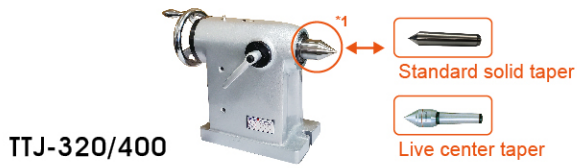


▲ HR-320 + RTH-320



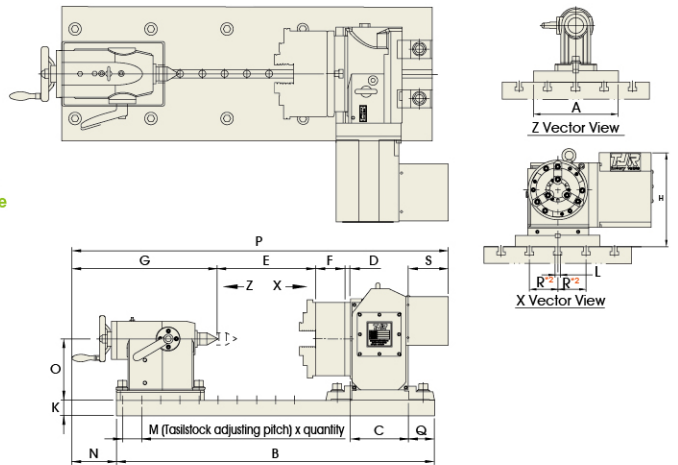
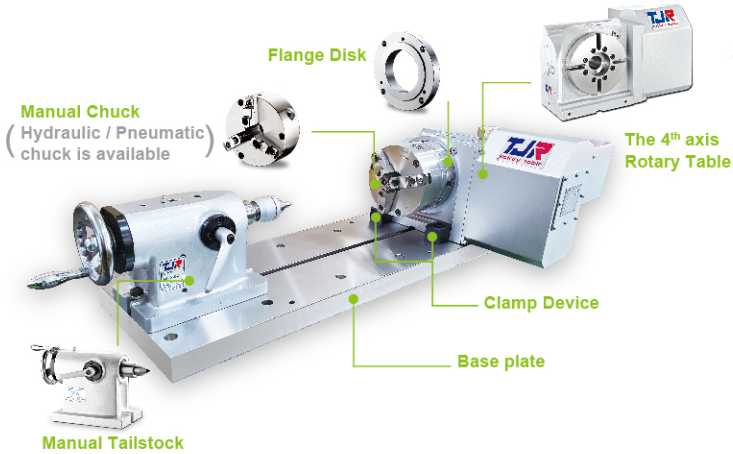
▲ HR-320 + RTH-320

Manual Tailstock & Corresponding Accessories



*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
HR-320 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
HR-400 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.



▲ HR-320 + TTJ-320



▲ HR-320 + TTJ-320



▲ HR-400 + TTJ-400