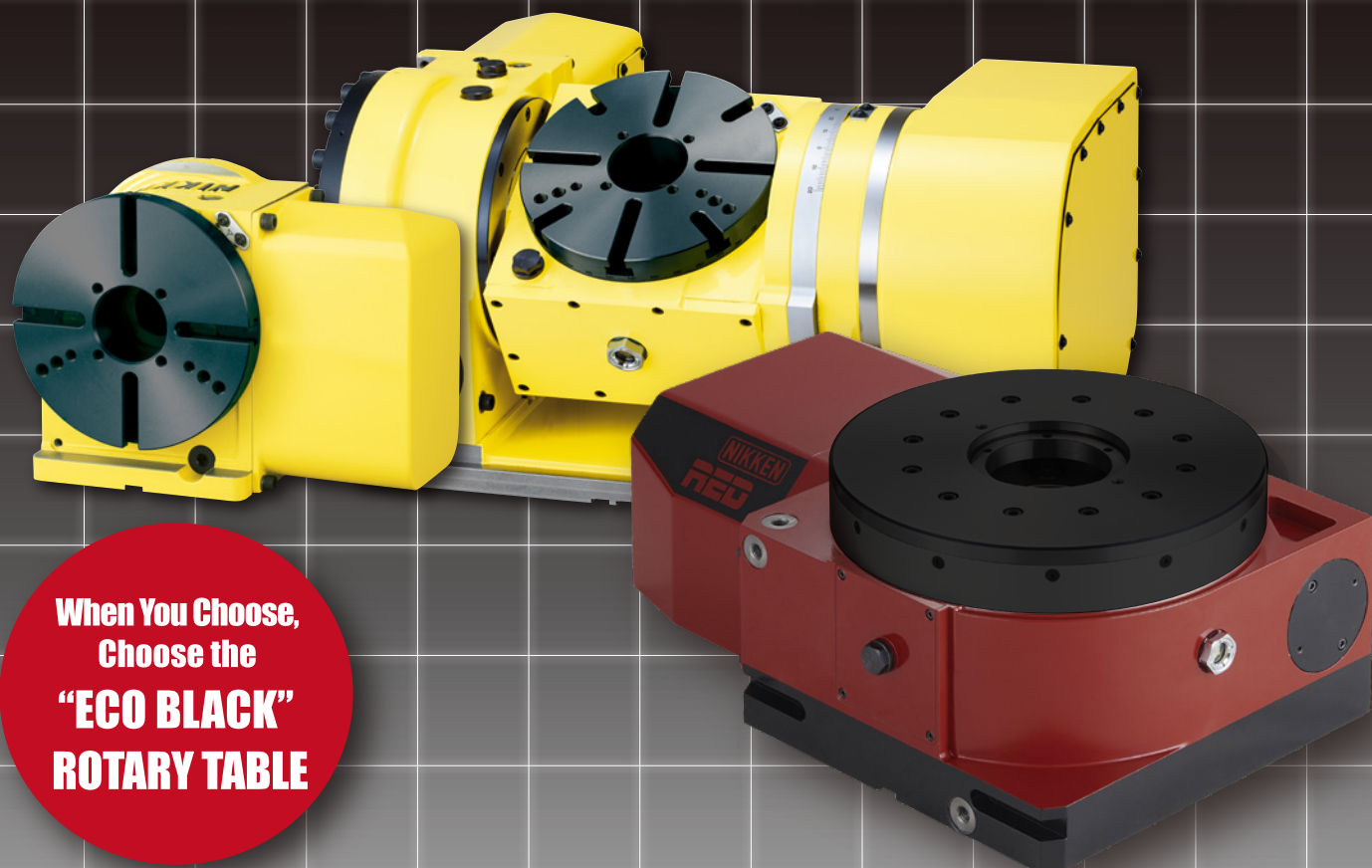


Significantly Reduce Time Spent on Anti-Corrosion Maintenance

ECO BLACK ROTARY TABLE



**When You Choose,
Choose the
“ECO BLACK”
ROTARY TABLE**

“ECO BLACK: Enhanced Durability for continuous industrial use”

Rust prevention

Proprietary RP Treatment : “Black rust prevents red rust.”

The table surface, which is the most rust-prone area, is treated with a powerful anti-corrosion process equivalent to the “Black Holder.”

This significantly reduces the time operators must spend on rust-prevention maintenance. It also prevents rust transfer to workpieces, fixtures, and machine tools, helping to avoid accuracy deterioration and serious operational troubles.

Dustproof / waterproof

Air Purge & Labyrinth Seal* as Standard Equipment

Standard air purge increases the internal pressure of the table to prevent coolant and dust ingress from outside. In addition, a non-contact labyrinth seal is used between rotating and stationary parts, further enhancing dustproof and waterproof performance.

*** The labyrinth seal is available on RED models only.**



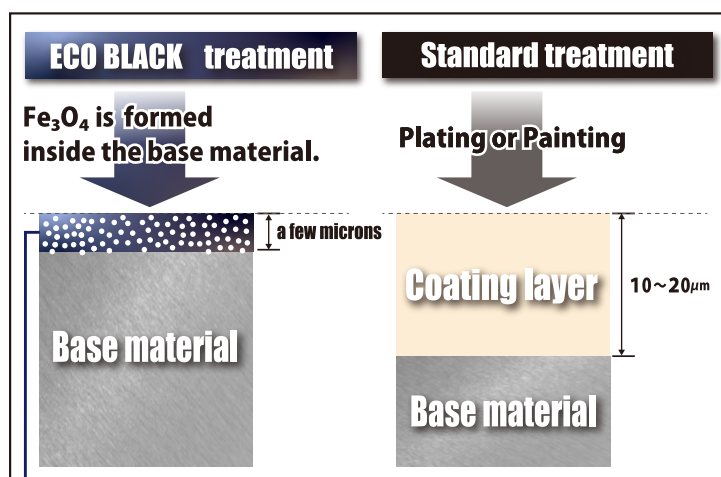
NIKKEN KOSAKUSHO WORKS, LTD.
5-1, 1-chome, Minamishinden, Daito-shi, Osaka-fu, Japan

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ECO BLACK: Automation for Manpower-Short Workplaces.

Powerful Rust Prevention That Keeps Corrosion Away

- ▶ ECO BLACK treatment applied to the table surface protects and maintains the accuracy of the workpiece mounting face.
- ▶ ECO BLACK treatment effectively prevents red rust even when using water-soluble coolants, and has no significant effect on heat-treated hardness or the mechanical properties of the base material.
- ▶ On the RED model, ECO BLACK treatment is also applied to the bottom (mounting) surface, protecting the machine-side table from corrosion.



The surface part that has become a porous structure by the black rust is treated with a water displacer by plant-based rust preventive oil, which replaces the moisture and oil in the pores. As a result, a more advanced rust prevention treatment is achieved.

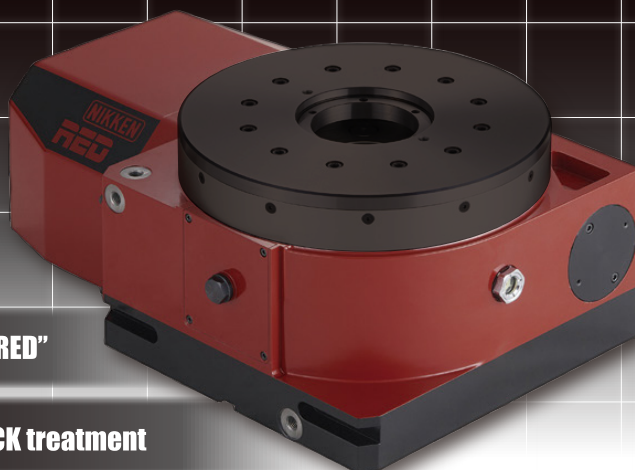
Internal Table Protection

- ▶ By applying air purge, the internal pressure of the table is increased to prevent the ingress of dust and coolant.
- ▶ The RED model adopts a labyrinth seal between rotating and stationary components, further enhancing dustproof and waterproof performance.

Turn Your Surface Grinder into a Rotary Grinder!

“ECO BLACK Rotary Table” Now Available with High-Speed SRP Specification

100r/min
High-Speed
SRP Spec



Equipped with the new Barrel Cam Mechanism “RED”

Powerful corrosion resistance through ECO BLACK treatment

Excellent dustproof and waterproof performance with air purge & labyrinth seal

Ideal for customers who want to introduce a rotary grinder but have limited installation space

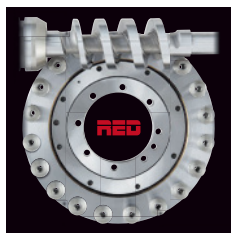
Based on a CNC rotary table equipped with the new no-backlash Barrel Cam mechanism “RED,” this model enables high-speed continuous rotation up to 100 r/min while maintaining high accuracy and rigidity.

Simply mount the unit onto your existing surface grinding machine to convert it into a rotary grinding machine. Of course, it can also be installed on machining centers, making it suitable for a wide variety of grinding applications.

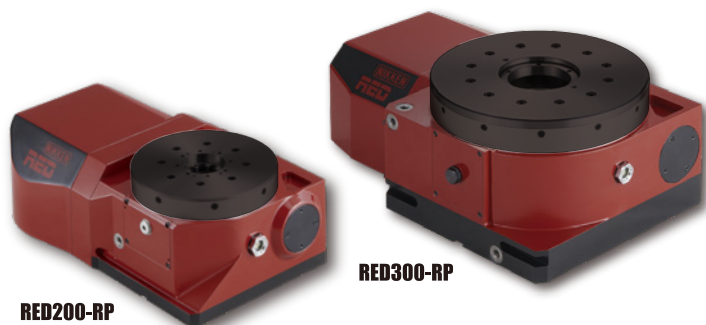
Item / Code No.	RED200-SRP	RED300-SRP
Diameter of Table	φ 206	φ 310
MAX. Work Load on the Table (In Horizontal Position)	200kg	350kg
Rotation Speed (During continuous operation)	100r/min	

★ Other specifications are the same as the standard model. Please refer to the specification table on the next page.

■ New “RED” Mechanism Model



This latest series of no-backlash CNC rotary tables achieves high-speed indexing, high rigidity, and high precision by incorporating the Barrel Cam Mechanism RED (Roller Evolution Drive).

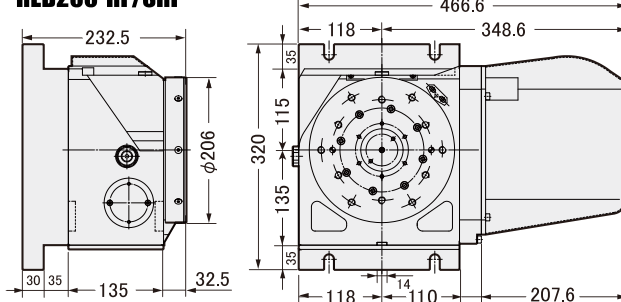


RED200-RP

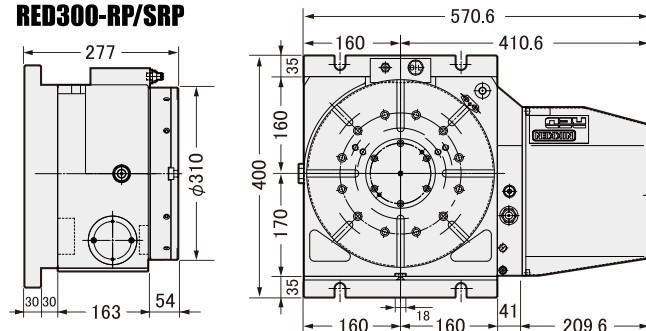
RED300-RP

■ Dimensional Drawing

RED200-RP/SRP



RED300-RP/SRP



■ Specification

Item / Code No.	RED200-RP	RED200-SRP	RED300-RP	RED300-SRP
Diameter of Table ϕ mm	206		310	
Diameter of Spindle Hole ϕ mm	$\phi 60_{H7} \phi 38$		$\phi 90_{H7} \phi 68$	
Table Top Surface Shape	M10 $\times$ 12 * ²		M10 $\times$ 14 * ²	
Axis	Rotary		Rotary	
Clamping System	Optional (Pneumatic) * ³		Optional (Pneumatic) * ³	
Clamping Torque N·m	600		600	
Table Inertia at Motor Shaft $\left(\frac{GD^2}{4}\right) \text{ kg} \cdot \text{m}^2 \times 10^{-3}$	—		—	
Servo Motor r/min	α iS4/5000-B $\cdot$ 3000		α iS8/4000-B $\cdot$ 3000	
MIN. Increment $\left(\frac{GD^2}{4}\right) \text{ kg} \cdot \text{m}^2$	0.001°		0.001°	
Rotation Speed r/min	50 (60) * ⁴		50 (60) * ⁴	
Continuous Rotation Speed r/min	10	100	10	100
Total Reduction Ratio * ¹	1/60	1/20	1/60	1/24
Indexing Accuracy sec	± 20		20	
Optional (Flange plate type) Rotary Joint max. number of ports	9+1		10+1	
Net weight (With base) kg	90		180	

* 1 The table rotation speed when the motor rotates at 3000r/min. Depending on the application (unbalance of the jig/work) and the motor specification, the motor may not be able to rotate at 3000r/min.

* 2 T-slotted faceplate is available as an option.

* 3 Without Mechanical brake is standard.

* 4 The motor is used at 3,000r/min. The rotation speed in () is when the motor is used at 3,600r/min. It may be possible depending on jig fixtures or components.

★ Driving torque means the torque at MAX. rotation speed after acceleration. Driving torque is almost constant and independent from the load except unbalancing load is applied.



Please note that rust may occur if the oil is completely removed, such as by degreasing, in an environment where the oil is completely removed.

■ NIKKEN Carbide Worm Screw System Equipped Model

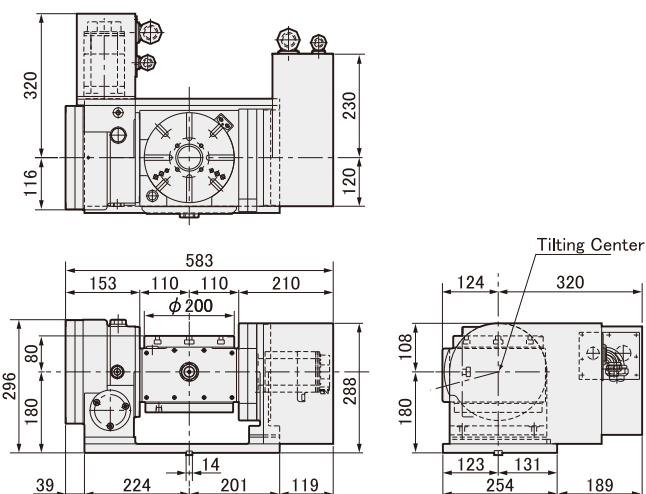


This CNC rotary table series achieves high rigidity and excellent wear resistance through the combination of an HV980 high hardness worm wheel, which is specially hardened and ion nitrided on the tooth surfaces, and a patented worm shaft.



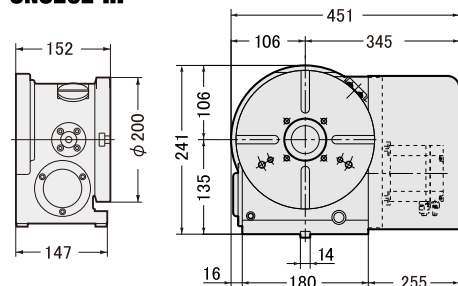
■ Dimensional Drawing : 2-Axis Model

5AX-201-RP

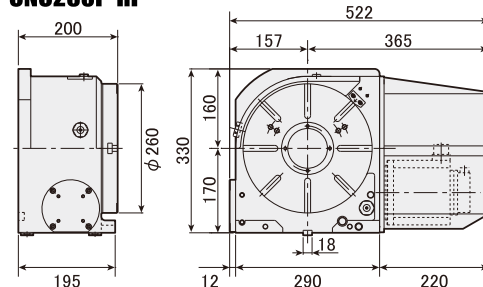


■ Dimensional Drawing : 1-Axis Model

CNC202-RP



CNC260P-RP



Optional : Rotary Joint Specification

Code No.	Body-integrated	External Type	Flange type
CNC202-RP	-	6+1	4
CNC260P-RP	-	10+1	11
5AX-201-RP	4	4 (6)	-

★ The numbers shown in parentheses indicate the maximum number of ports when the high center height specification is used.

■ Specifications

Item / Code No.	CNC202-RP	CNC260P-RP	5AX-201-RP
Diameter of Table ϕ mm	200	260	200
Diameter of Spindle Hole ϕ mm	$\phi 60_{H7} \phi 40$	$\phi 105_{H7} \phi 80_{H7}$	$\phi 60_{H7} \phi 50$
Center Height mm	135	170	180 (90°)
Table Height in Horizontal Position mm	-	-	260 (0°)
Table Top Surface Shape mm	12 $^{+0.018}_0$	12 $^{+0.018}_0$	12 $^{+0.018}_0$
Axis	Rotary	Rotary	Rotary Tilting (0° ~ 105°)
Clamping System	Pneumatic *1	Pneumatic	Hydraulic/Pneumatic *1*2 Hydraulic/Pneumatic *1*2
Clamping Torque N·m	303	1430	588/303 *1*2 612/303 *1*2
Table Inertia at Motor Shaft $\left(\frac{GD^2}{4}\right) \text{ kg} \cdot \text{m}^2 \times 10^{-3}$	0.09	0.33	0.11 0.16
Servo Motor r/min	α iF4 · 3000	α iF4 · 3000	α iF2 · 3000 α iS4 · 2000
MIN. Increment	0.001°	0.001°	0.001° 0.001°
Rotation Speed *3 r/min	33.3	25.0	33.3 16.6
Total Reduction Ratio	1/90	1/120	1/90 1/120
Indexing Accuracy sec	± 20	20	± 15 60
Net weight kg	55	110	160

*1 Air Intensifying Booster system is available if the supplied air pressure is under 0.5MPa or the brake torque is required to increase.

*2 Air brake system is also available for 5AX-201.

*3 The table rotation speed when the motor rotates at 3000r/min. Depending on the application (unbalance of the jig/work) and the motor specification, the motor may not be able to rotate at 3000r/min.

★ Driving torque means the torque at MAX. totation speed after acceleration. Driving torque is almost constant and independent from the load except unbalancing load is applied.