



December 2, 2024 SHINKAWA LTD.

# Shinkawa to Release Next-generation High-Speed Wire Bonder: UTC-RZ1

# Compact design with enhanced area productivity and energy efficiency -Cutting-edge monitoring functions and automation options to ensure stability and productivity

December 2, 2024 - SHINKAWA Ltd. will release its next-generation high-speed wire bonder UTC-RZ1 in 2025. This new model features a redesigned platform with a compact footprint, improving space productivity.

Compared to the existing model UTC-5000NeoCu Super, the UTC-RZ1 is downsized by 25% and offers a higher UPH performance, thus achieving higher area productivity.

This model incorporates SHINKAWA's unique non-reaction servo (NRS) system, the reference positioning system (RPS) that automatically corrects a capillary tip position influenced by heat using the camera offset function, and automatic free air ball monitoring (FAM) for measuring initial ball.

It also features the latest monitoring functions to increase production reliability and stability. In addition, a variety of optional functions are available to meet various automation needs.



#### Market background and product overview

Semiconductor packages that require wire bonding technology are increasingly in demand, not only for conventional consumer electronics such as smartphones and PCs, but also for emerging applications in the automotive industry.

Given these circumstances, SHINKAWA has developed a new platform designed to enhance productivity, meet the highest quality standards required for automotive semiconductors, and facilitate the automation of future wire bonding processes.

#### **Major Features of UTC-RZ1**

1. Compact footprint to increase floor space productivity

The UTC-RZ1 boasts a footprint of 962 mm x 936 mm, a 25% reduction compared to the existing UTC-5000NeoCu Super. By incorporating new XYZ motors and the latest control technologies, it enhances UPH by 14% and area-based productivity by 37%.

2. Enhanced production reliability and stability through various monitoring functions

Our new US current auto correction function "UCAC2" measures the Z-axis motion during ball bonding and fine-tunes the US power among bonders, minimizing machine-to-machine differences in bonding performance.

Furthermore, new monitorable items have been added to our existing process monitor system, achieving a higher level of quality control.

3. Reducing power consumption and air consumption to reduce environmental impact

Compared to our existing models, the UTC-RZ1 delivers higher performance while reducing air consumption by 50% and maximum power consumption by 12%. This contributes to reducing production running costs.

4. Automating production line

A wide variety of options are available to automate wire bonding processes.

- Auto recovery functions, in which the machine performs post-error processing and self-recovers in the event of an error
- · Newly developed capillary auto change unit (CAC) that allows exchanging capillaries automatically
- Established an interface between the bonder and the robot for automated magazine transfer on the production line flexibly adapted by collaborating with an outsourced systems integrator.

### **Basic Specifications**

Model name	UTC-RZ1
Dimensions	W: 962 mm (with pull-in pincher specification) /
	D: 936 mm / H: 2000 mm
	* Includes signal tower.
Weight	550 kg
Voltage	200-240 V
Air	500 kPa
Vacuum	-74 kPa

## **Contact for Inquiry**

SHINKAWA LTD. Sales Division +81-42-560-1225