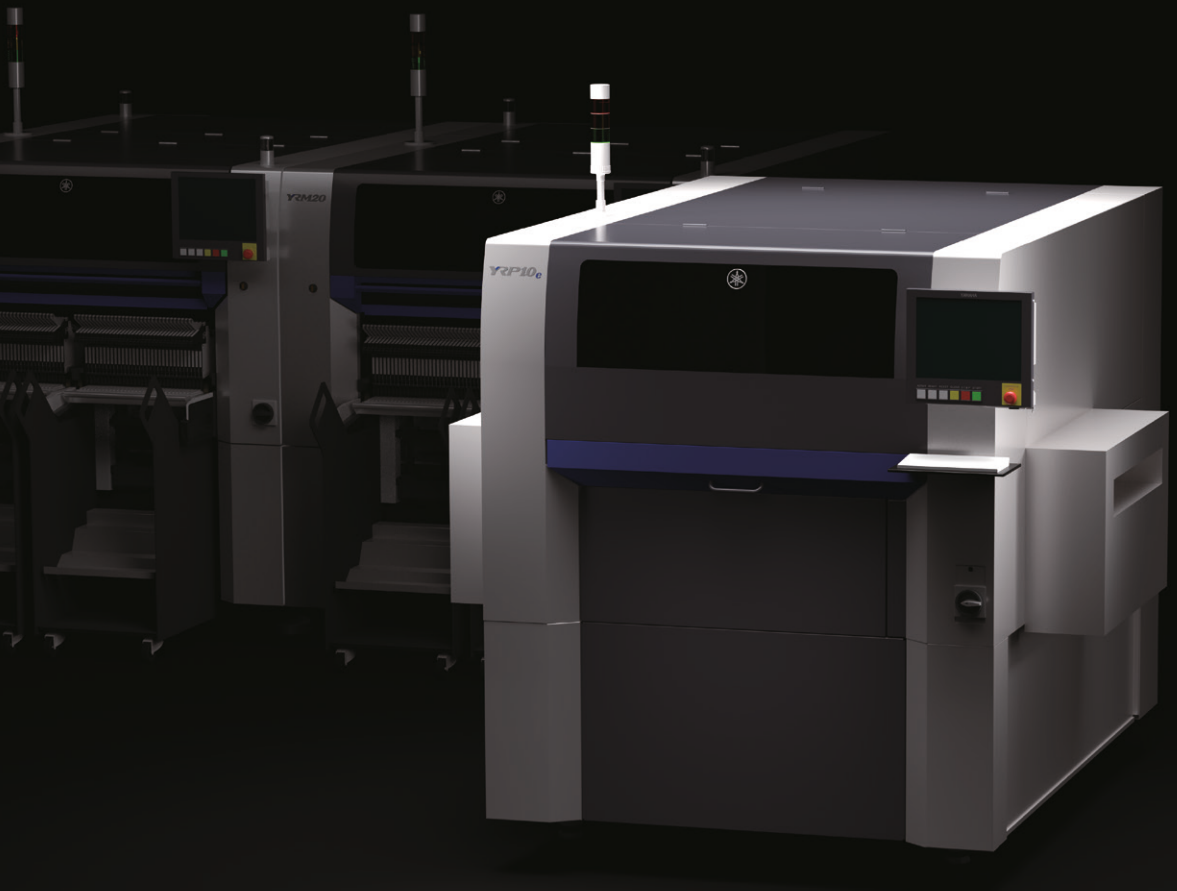
YAMAHA
Revs Your Heart

PCB ASSEMBLY SYSTEM

Solder-Paste Printer

YRP10e



Contributes to high-quality high-efficiency production by linking with lines and abundant functions

Single-lane printer that achieves high-quality printing through high universality and multifunctionality

Solder-Paste Printer

YRP10e

High-quality printing	Abundant functions ensure a high printing accuracy of μ ± 6 σ: ± 30 μm Cpk ≧ 2.0.
High production	Reduction in transfer/cleaning time achieves high-efficiency and low-loss production.
Flexibility	A full range of functions enables the handling of various types of PCBs, reducing the burden on operators.

Watch a video on the official site

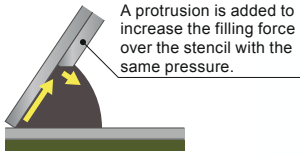
Feature 1 High-quality printing

Original 3S head has excellent flexibility and fits various types of PCBs

Yamaha's original 3S head allows operators to set/change arbitrarily all the parameters including the squeegee angle, speed, and pressure. This enables the handling of a wide variety of solder and stencil types to ensure printing under optimal conditions.

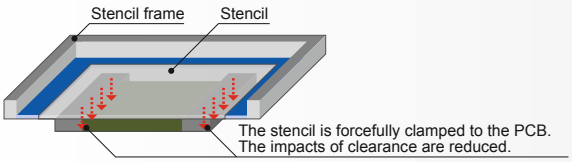
Improved filling efficiency and extended stencil life

In order to improve the printing quality, a squeegee excellent in rolling performance was developed. This reduces solder adhesion issues to minimize solder waste. The blade hardness is adjusted to extend the stencil life.



Stable printing quality

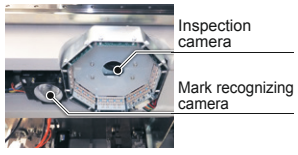
A stencil vacuum mechanism reduces the effects of stencil and PCB distortion to achieve stable high-precision printing. The setup time is reduced as there is no need to input offsets during reciprocating printing.



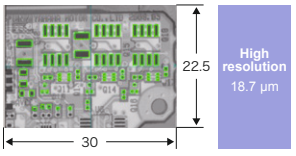
Never overlooks printing failures

The built-in 2D inspection function inspects solder printing conditions in place of the SPI. YRP10e prevents overlooking printing failures to complete the printing process within itself. Feedback from inspection results allows automatic over-printing and stencil cleaning to support nonstop production.

Dedicated inspection camera

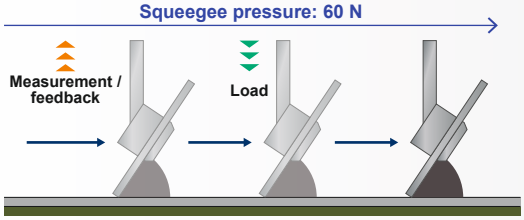


Large view field size



Squeegee pressure control reduces variation

A load cell sensor installed in the head measures squeegee pressure to perform feedback. This enables always printing by a constant pressure to reduce variation between forward and backward printing.

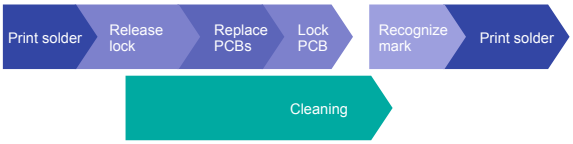


Feature
2 High production

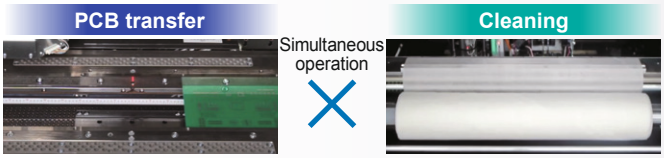
Simultaneous operations reduce time loss

Fast transfer contributes to achieving a short cycle time of the whole line.

Core cycle time: 6.0 s/PCB

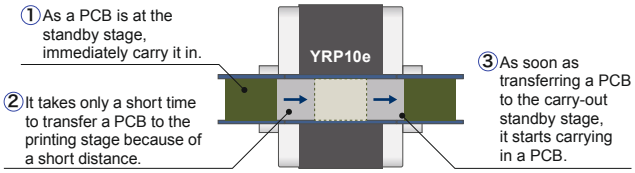


Conducting cleaning in parallel with transfer improves practical productivity.



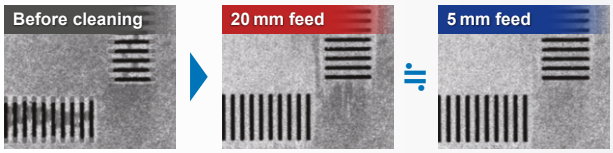
Reduction in transfer time improves productivity

Using a 3-section conveyor enables staging up to 3 PCBs inside the printer. Reducing distances needed for standby, print, and carrying-out decreases the substantial cycle time, contributing to an improvement in productivity.



Achieves both high workability and high quality

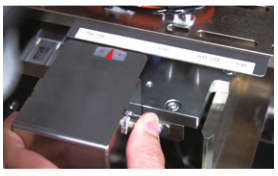
Adjusting the feeding amount of cleaning paper and using a large-capacity solvent tank minimize the replenishment frequency to decrease the downtime. Even a minimum feeding amount can maintain a high cleaning performance.



Feature
3 Flexibility

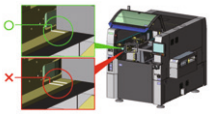
Easy stencil replacement without errors

The stencil holder can be replaced with another one selected from seven stencil sizes with a single touch. Place a stencil at a specified point, and the machine will automatically move it to the right position and fix it there. This provides anyone with an easy stencil replacement procedure free from human errors.



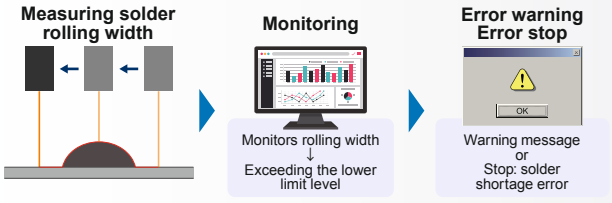
Place a stencil at a temporary position

Place a stencil within the area shown below, the machine will set the stencil automatically.



Timely and efficient solder refillment

The system measures the amount of solder on the stencil regularly and alert as necessary the timing of refillment and prevent failure of solder refillment. Based on the measurement results, it can also trace the relationship between the amount of solder and printing defects.

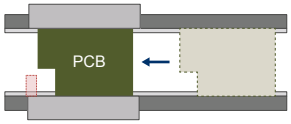


Transfer system handles almost all PCB types

This is a PCB transfer system without stoppers, which is hardly affected by external PCB forms. The mechanical stopper on the side of the camera unit responds flexibly to extremely complicated shaped PCB.

High-speed transfer without stoppers

Achieves high-speed transfer without mechanical stoppers.

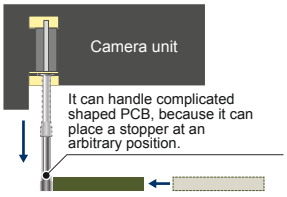


Transfer speed

Up to **600** mm/sec

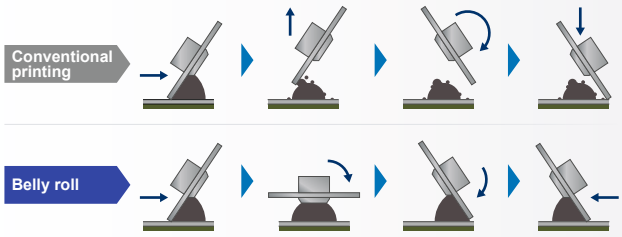
Flexible mechanical stopper

The stopper can be descended to an arbitrary position.



Preventing solder from lifting and scattering

The original squeegee operation (belly roll) performs solder rolling by keeping the squeegee and solder in contact. This prevents solder from scattering and reduces solder loss. It provides a stable printing quality regardless of solder types or printing conditions.

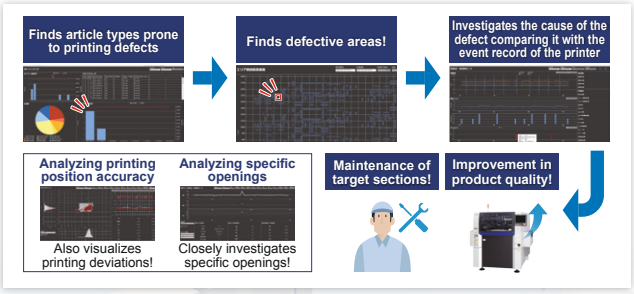


1 STOP SMART SOLUTION

High-efficiency, defect-free production, made possible as Yamaha is a manufacturer of inspection system, solder-paste printer and surface mounter.

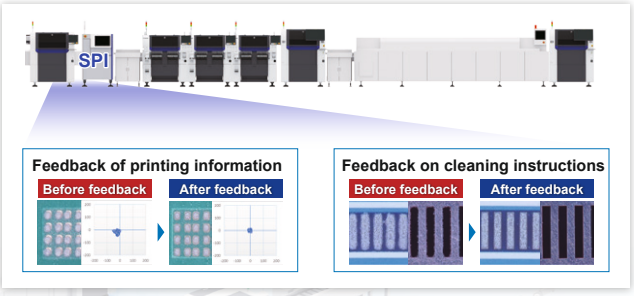
Supports improvement activities, contributes to improving printing quality

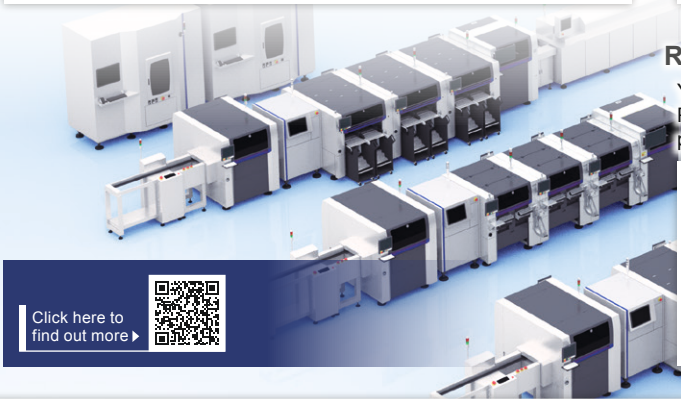
Linking SPI results and printer information, analyzes printing position accuracy and specific openings. Supports quick cause investigation.



Stabilizes product quality easily and automatically

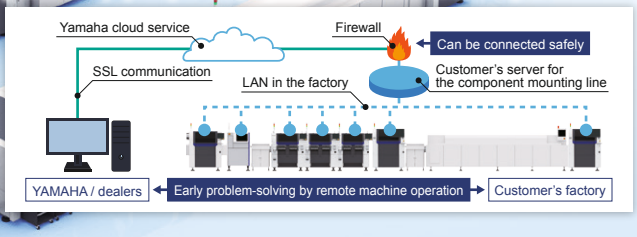
Linking with the SPI, automatically executes correction of printing positions and cleaning. Contributes to stabilizing printing quality when using PCBs of poor accuracy or that are highly difficult.





Reduces production loss by quick recovery support

Yamaha's engineers check the screens of customers' equipment and PCs with offline software via the internet. Supports solving customers' problems by quickly identifying the details of flaws and inquiries.



SEMI SMT-ELS Capable

Compatible with SEMI SMT-ELS Communication Standards (option).
Achieves seamless connection for, for example, Auto Program Change-Over, with other companies' machines.

Specifications

Note: Specifications and appearance are subject to change without prior notice.

Model	YRP10e
Printing accuracy	μ ± 6 σ ± 30 μm Cpk ≧ 2.0[Note 1]
Applicable PCB	L 50 x W 50 mm to L 510 x W 510 mm[Note 2]
Core cycle time (Not include printing)	6.0 sec
Applicable stencil size	750 x 750, 750 x 650, 736 x 736, 650 x 550, 600 x 550, 584 x 584, 550 x 650
Power supply	Single-phase AC 200/208/220/230 ± 20 V 50/60 Hz
Air supply source	Over 0.45 MPa, clean and dry state
External dimension	L 1,640 x W 1,840 x H 1,525 mm
Weight	Approx. 1,710 kg (Main unit only)

Note 1: Measured using CeTaQ's instrument under YAMAHA's optimum conditions
Note 2: Maximum PCB size when the option is selected

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The models shown in the photographs in this catalog may differ slightly from the standard specifications. Specifications and appearance are subject to change without prior notice.

Yamaha Motor Robotics division is a subsidiary of Yamaha Motor Company. Version: April 2025.