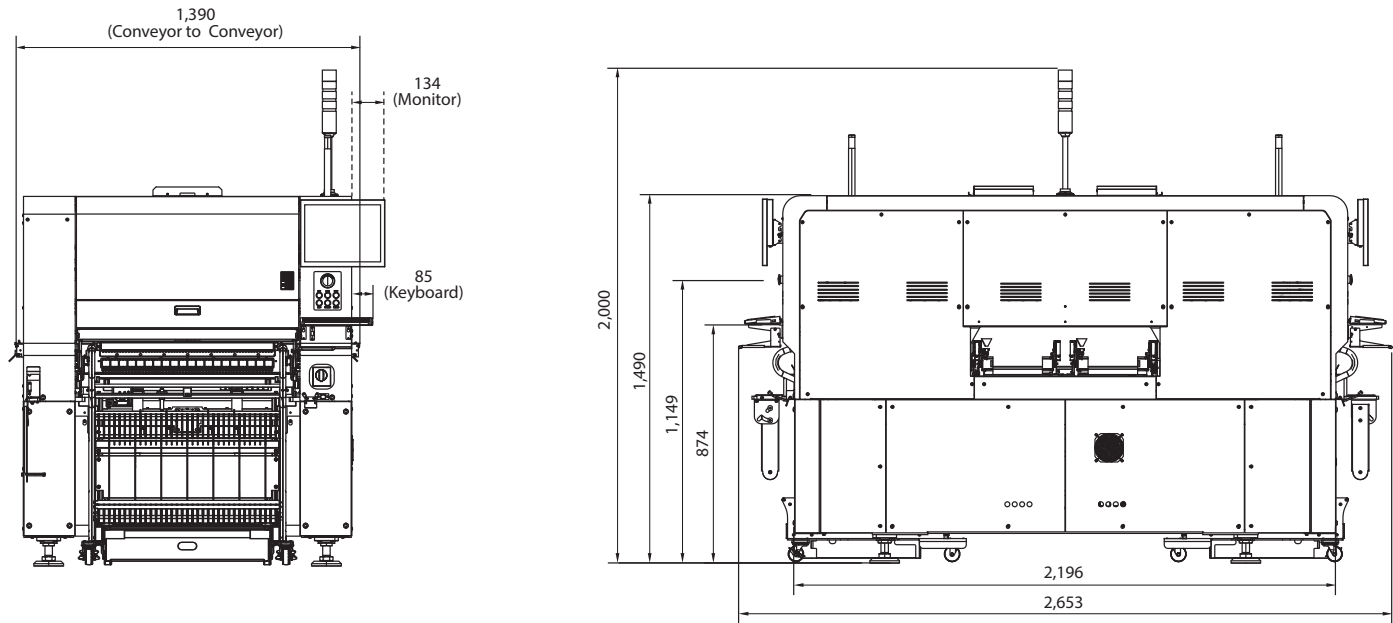


Specifications			
Head Type		MF(Multi Function) Head	HP(High Precision) Head
The Number of Spindles		2 Gantry x 8 Spindle	2 Gantry x 3 Spindle
Placement Speed (Per head) *		26,000 CPH (Optimum)	11,000 CPH (Optimum)
Placement Accuracy *	Chip	±30 μm @ Cpk ≥ 1.0	±40 μm @ Cpk ≥ 1.0
	IC	±25 μm @ Cpk ≥ 1.0	±20 μm @ Cpk ≥ 1.0
Component Range	Size	0402 ~ 100 x 45 mm	0603 ~ 150 x 74 mm (* 200 x 130 mm)
	Max. Height	15 mm	40 mm
	Force (Max)	-	~ 100N
PCB Size (mm)	Min.	L50 x W40	
	Max.	Dual Work (4 Station)	L720 x W315 (Dual Mode), L720 x W590 (Single Mode)
			* L: 260 (Buffer) -350 (Work A) -350 (Work B) -260 (Buffer), Max. 720 mm
		Single work (2 Station)	L510 x W315 (Dual Mode), L510 x W590 (Single Mode) Max. L750mm (2Clamp)
PCB Thickness (mm)		0.3 ~ 4.2	
Feeder Capacity	Cart	60 slot (Cart) x 2	
	Fix + Cart	(18 slot (Fix) + 40 slot (Cart)) x 2	
		* 40 slot (Cart) ↔ Direct Tray	
Utility	Power	3 Phase AC 200/208/220/240/380/415V±10%	
		Max. 4.5 kVA	
	Air Consumption	0.5 ~ 0.7 Mpa	
		100 NI/min	
External Dimension (Standard) (mm)		L1,390 x D2,370 x H1,980	

* Under our optimum conditions

Dimension



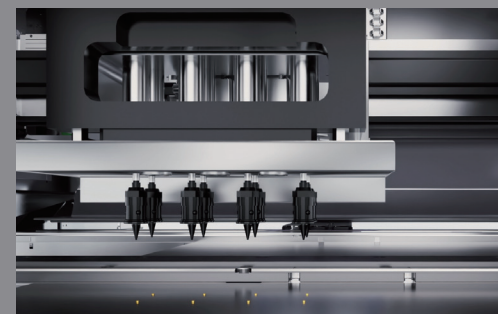
USA 6000 Phyllis Dr. Cypress, CA 90630, USA Tel : +1-714-373-4200
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• The dimensions, product specifications and values in this catalog are actual values measured under conditions designated by our company.
• The above items may differ depending on actual operating conditions. For the details related to options, please contact the person responsible for sales.
Doc. No. SMT-HM520W-CAT-KR-002 © 2023 Hanwha Precision Machinery Co., Ltd. All rights reserved.



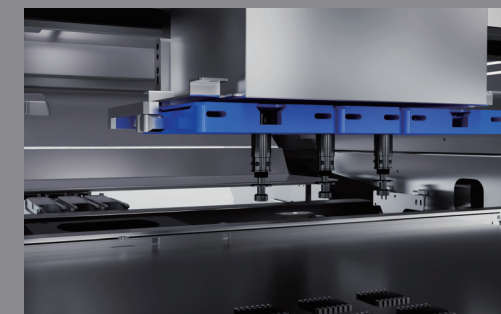
PREMIUM FLEXIBLE MOUNTER HM520W

With its best-in-class performance, the HM520W is a premium wide high-speed chip mounter that offers overwhelmingly excellent actual productivity, placement quality, applicability, and operational convenience.



MF(Multi Function) Head

- 8 Spindle x 2 Gantry
- 26,000 CPH/Head
- $\pm 25 \mu\text{m}$ @ Cpk ≥ 1.0
- 0402 ~ 100 x 45 mm
- 15mm (Max. Component Height)



HP(High Precision) Head

- 3 Spindle x 2 Gantry
- 11,000 CPH/Head
- Force Control (100N)
- $\pm 20 \mu\text{m}$ @ Cpk ≥ 1.0
- 0603 ~ 150 x 74 mm
* 200 x 130 mm
- 40mm (Max. Component Height)
- * Under our optimum conditions

T-Solution

T-IT

Provides solutions for component misplacement prevention and material production history management

T-OLP

Planning with optimal production conditions

T-PNP

Maintains optimum quality through a real time diagnosis report

T-SMART

Monitors the production status anywhere, anytime, using a tablet PC and smart watch

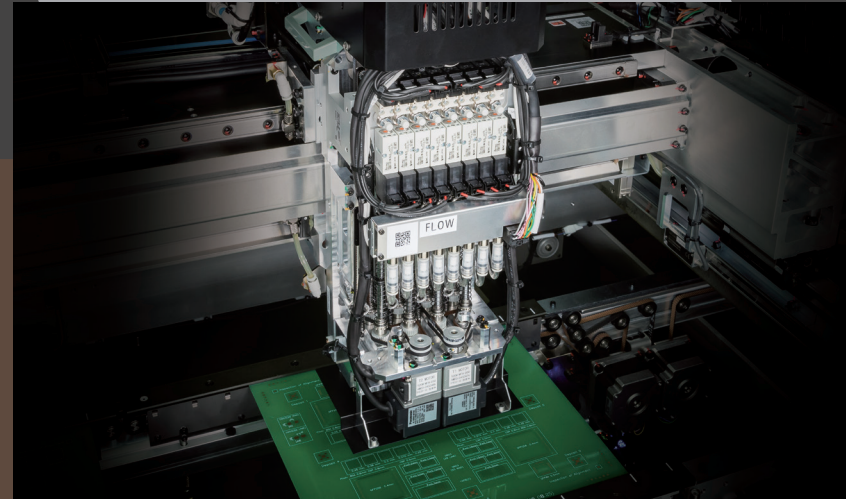
High Productivity

Max. 26,000 CPH/Head

Best-in-Class Productivity

The Industry-leading HM520W's cutting edge universal head and odd-shape head improves line productivity by maximizing efficiency with high actual productivity, wide applicability to components, wide head pitch, and simultaneous handling quantities.

In addition, the method of handling odd-shape components has been optimized to minimize the impact of cycle time due to deceleration.



IC $\pm 20\mu\text{m}$ @ $\text{CPK} \geq 1.0$

Best-in-class Placement Accuracy

The HM520W achieves high placement accuracy of $\pm 20\mu\text{m}$ for ICs and $\pm 30\mu\text{m}$ for chips, and the RunTime Calibration function ensures placement accuracy is maintained.

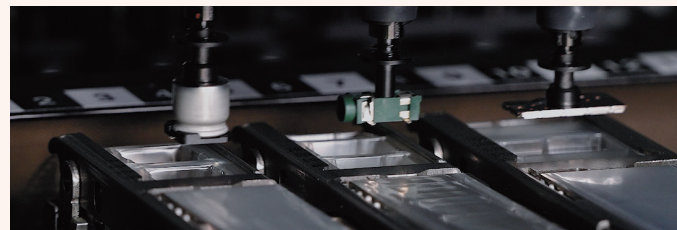
In addition, equipped with the Flow Monitoring function and Nozzle Check function to suppress occurrence of any single defect, it maintains a high level of placement quality.

High Reliability



High-speed and High-precision Placement of Odd-shape Components

The MF head can handle eight nozzles simultaneously, up to $\square 14\text{mm}$ and T15mm components, and the improved component recognition motion and the avoidance of unnecessary Z-axis deceleration greatly reduce the placement cycle time of medium and large sized components.



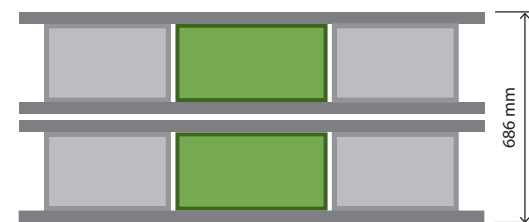
Enhanced Line Productivity

The wide type high speed chip mounter, HM520W, whose placement performance for odd-shape components is complemented, maximizes the line productivity of the HM series mounters along with the slim type high speed chip mounter, HM520Neo, which is advantageous for placing small chips.



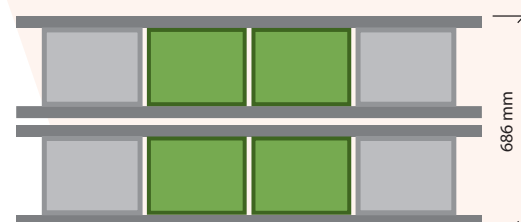
PCB Transfer Time Reduced by 47%

The PCB transfer distance has been reduced by providing a buffer, and the PCB loading time can be significantly reduced since PCBs can be quickly detected and transferred by improving the sensor and belt.



Single Work

- Work: 510 x 315 up to 590
- Entry (Buffer): 460 x 315, Exit: 290 x 315
- Allows efficient production without an extension C/V when producing medium- and large-sized PCBs up to L460



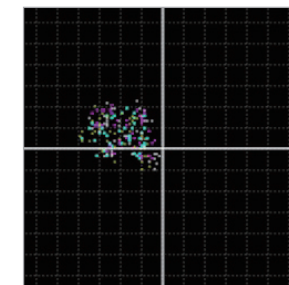
Dual Work

- Work: 720 (350 + 350) x 315 up to 590
- Entry (Buffer): 260 x 315, Exit: 260 x 315
- Allows high-efficiency production when producing medium-sized PCBs up to L350
- One clamp applicable up to L720mm

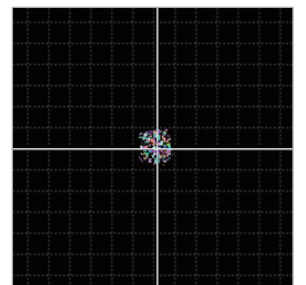
Maintains Placement Accuracy through Automatic Calibration during Production

Possible to maintain placement accuracy continuously by performing major calibrations at the set time during production.

* For more information, please contact our sales person



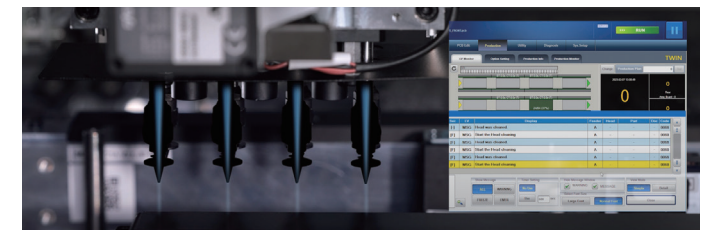
Before Runtime Calibration



After Runtime Calibration

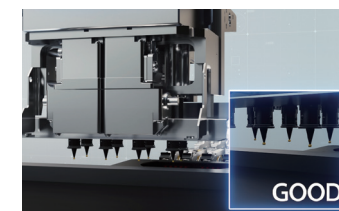
Automatic Nozzle Inspection and Cleaning during Production

Minimizes machine downtime due to a defective nozzle by checking for nozzle clogging and spring tension during production and by cleaning the nozzle with strong air blow when checking for any problem.

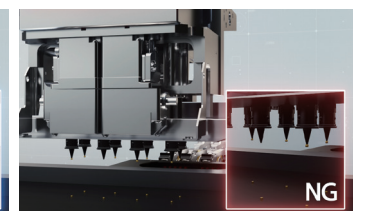


Suppression of Occurrence of Single Defect

The Vacuum Flow Monitoring sensor of the head detects the presence of components from component pickup to placement completion stage, preventing occurrence of a defect.



GOOD

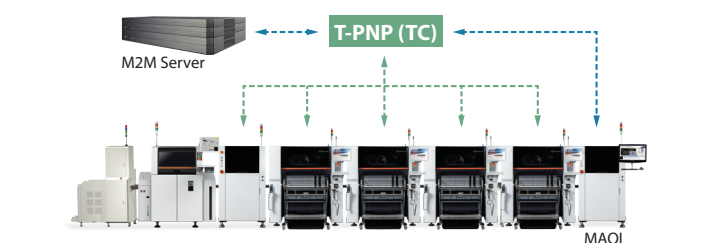


NO GOOD

Automatic Calibration of Placement Coordinates (T-M2M-AC/SC)*

Calibrates the placement offset of the chip mounter automatically to improve placement accuracy by receiving the feedback of the inspection results of the M-AOI in real time.

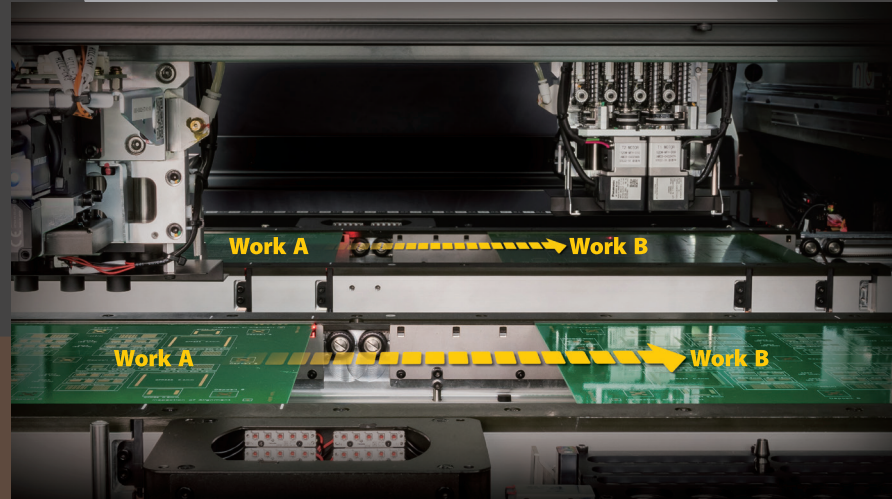
* Needs to be purchased separately



Flexible Production

Dual Work Zones Increase Actual Productivity

While installing a PCB in Work B, have the next PCB wait in Work A. After placing components on the PCB in Work B, it is possible to place components in Work A directly without additional loading time.

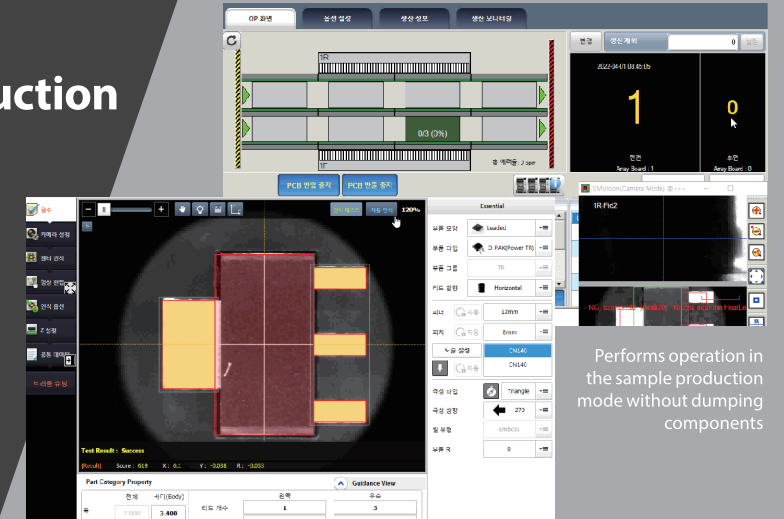


Zero Waste of Components during Initial (Sample) Production

Realizes zero waste of components that occurs during job change without dumping the component to which a recognition error occurred during sample production but by immediately editing component information and PCB coordinate and placing components.

* For more information, please contact our sales person

Convenient Operation



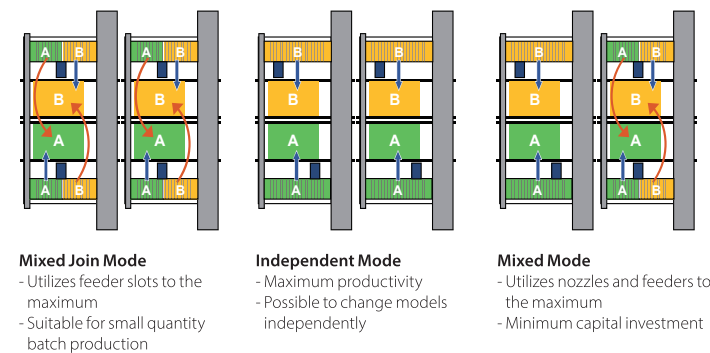
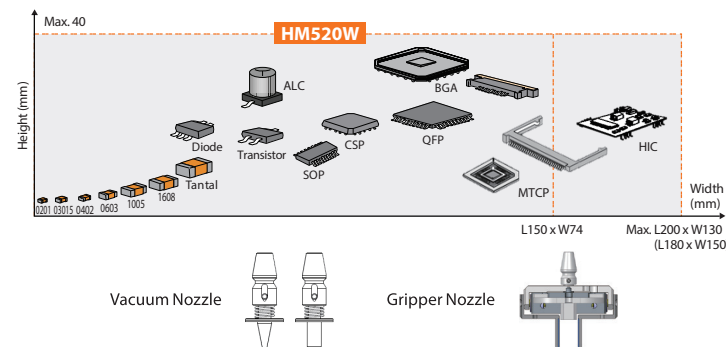
Performs operation in the sample production mode without dumping components

Starts production after registering the component in the component library

Wide Applicability to Components

Possible to place components from 0402 to extra-large insert components of Max. 200 x 130mm and height up to 40mm respectively. Also applicable to components widely by allowing a pneumatic nozzle as well as gripper nozzle to be used simultaneously.

* Refer to the specifications of each head for the range of applicability to components



Mixed Join Mode

- Utilizes feeder slots to the maximum
- Suitable for small quantity batch production

Independent Mode

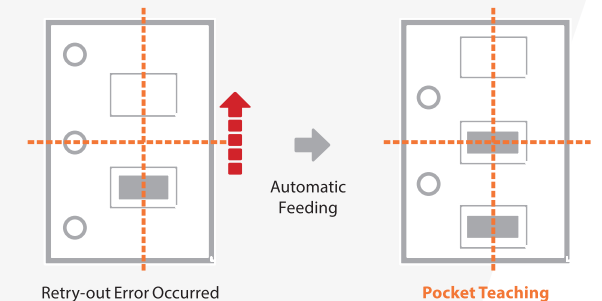
- Maximum productivity
- Possible to change models independently

Mixed Mode

- Utilizes nozzles and feeders to the maximum
- Minimum capital investment

Minimizes Machine Stoppage due to Pickup Retry Errors

By performing automatic feeding and pocket teaching, minimizes unnecessary machine stoppage in the event of an error due to an excessive number of component pickup retries.

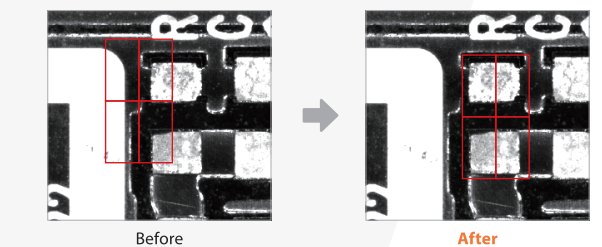


Retry-out Error Occurred

Pocket Teaching

Automating Placement Point Teaching

By automating the inspection and modification of the placement points of standard chips, the time required for checking and fine adjustment of the placement coordinates during model change has been significantly reduced.



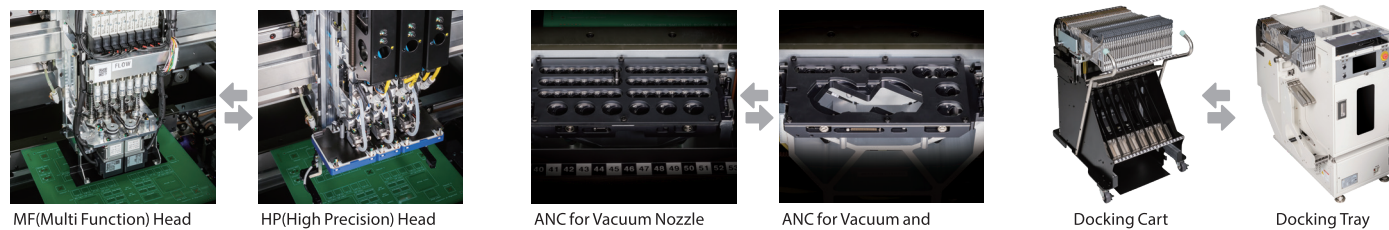
Before

After

Applicable to Various Product Types

The industry-leading MF and HP heads are available for quick replacement and allow configuration with different types of heads at the front and rear, thus allowing flexible measures to be taken for various types of production models. In addition, it is easy to replace the Docking Cart with the Docking Tray and vice versa, and the ability to replace the nozzles in the unit of an ANC provides an optimal solution for all types of production models.

* For the configuration of different types of heads at the front and rear, please contact our sales person



MF(Multi Function) Head

HP(High Precision) Head

ANC for Vacuum Nozzle

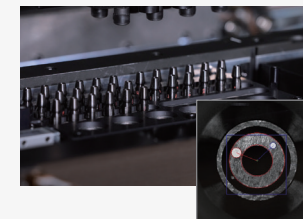
ANC for Vacuum and Gripper Nozzles

Docking Cart

Docking Tray

ANC and Nozzle Barcode Recognition and Automatic Rearrangement

Reduces the model changing time by having the camera recognize ANC and nozzle bar codes and by automatically arranging the nozzles to suit the nozzle arrangement from the PCB program.



Independent Model Change

While performing production at the front and rear lanes, it is possible to change the models at the opposite lane without stopping the machine. - Possible to exchange feeders and docking carts for model changes during production



Prevention of Re-modification of NPE and Library

Applies the New Part Editor (NPE) function which allows component registration using the drawing method. In addition, line efficiency and convenience is enhanced by setting the number of nozzles available to each component to two and by allowing individual parameter setup. Moreover, by subdividing the placement speed reduction and setting the Soft Touch for each component, the efficiency reduction of odd-shape components that need placement speed reduction is minimized.