

### ■ New intelligent YST15 SMD storage system

The YST15 surface mount device (SMD) storage system is capable of storing up to 1,500 reels of components directly and allows bulk loading and unloading of up to 36 reels in one batch. Through interlinking with a mounting line that makes use of the Intelligent Factory Internet of Things (IoT)/machine-to-machine (M2M) integration system, which enables centralized management of electronic component mounting processes, YST15 automatically supplies in bulk the required amount of surface mounted components in advance at optimal timing.

This reduces significantly the work load and time of workers because interruptions in production are prevented due to delays in device supply. In addition, the optional humidity management function provides storage appropriate for electronic components that require a humidity control.

Furthermore, YST15 fosters comprehensive production efficiency of the mounting process as it is interoperable with various equipment in the production floor, such as the Yamaha Motor Auto Loading Feeder, which allows the supply of mount components any time without stopping an operating machine. It also allows automatic transportation of components to the production line with the use of Automatic Guided Vehicles (AGVs).



### ■ YSi-SP 3D high-speed solder paste inspection system

The YSi-SP 3D high-speed solder paste inspection (SPI) machine is a multi-purpose, high-precision, and high-speed solder paste inspection system based on a one head solution concept. It handles high-precision inspection of solder paste under various conditions using a unique measurement algorithm combining 3D and 2D, and image resolution switch-over utilizing super-high resolution technology. Options such as adhesive coating inspection and foreign matter inspection are also available.

Leveraging the company's wide range of surface mount machines, YSi-SP can work with various Yamaha Motor's machines for an improved efficiency and quality and enable functions such as automatic setup change, automatic adjustment of the solder position shift, and automatic conversion from application data to inspection data of a dispenser.

Furthermore, it also offers Statistical Process Control (SPC), a function that enables the YSi-SP to perform various statistical processing.



### ■ Z: LEX YSM20R TypePV/TypeSV high-end and high-efficiency modular mounter

The versatile Z:LEX YSM20R modular mounter, which comes in two models, is based on the one-head solution concept that is free from head replacement and is compatible with wide range of component sizes.

In the more advanced TypePV model, the transportation speed in the XY axis has been increased from pickup to placement with a mounting speed of up to 95,000 chips per hour (cph), which is the one of industry's fastest in the two-beam and two-head class category (under optimal condition set by Yamaha Motor in January 2018). Its wide-scan camera has been improved as well and the maximum size for high-speed loading has been expanded to 12mm square, drastically improving productivity.

Furthermore, the Z:LEX YSM20R TypePV model noticeably reduces cost and time loss and increase machine operation rate by employing the company's unique Auto Loading Feeder (ALF) technology, the sATS30NS Auto Tray Sequencer (ATS) nonstop collective tray pallet exchange system, and the nonstop feeder carriage exchange system. Therefore, it is possible to construct a line capable of flexibly and efficiently matching itself to various types of production of all kinds of products.

The standard model TypeSV, meanwhile, has a mounting capacity of 90,000cph (at optimal conditions) and is also available as the successor to YSM20.



### ■ Σ-G5SII premium modular mounter

This new general-purpose and high-speed mounter of the Σ Series realizes high speed and versatility without head replacement as it is based on the one-head solution concept using a rotary head.

The conventional model Σ-G5S has attractive features, such as a rotary direct drive head that realizes high speed and high precision, an overdrive motion that enables parts to be adsorbed from both feeders in front of and those behind the machine and realizing high efficiency production, and a Super Loading (SL) Feeder header that makes components replenishment and replacement efficient without splicing. With these features intact in the new products, the productivity is further improved by adopting new heads, improving the board carrying sequence, expanding the buffer size in the device when carrying large boards, among others. It realizes mounting speed of 90,000cph (at optimal condition), which is about 20 percent faster than the previous performance.

In addition, it corresponds to 0201 (0.25x0.125mm) size ultra-small chip components and ensures high compatibility with the major options of Σ-G5S, such as nozzles, tape feeders, carriages, nozzle stocker replacement parts, among others.

