YAMAHA

TRUSTED TECHNOLOGY



Z:LEX YSM20R

SMT Innovation

High-Efficiency Modular Mounter

Caters effectively to a wide range of production processes.
World's fastest in its class.

YSM20R Single Lane
Maximum PCB size L 810 mm x W 490 mm

Mounting capability
95,000 CPH Champion
66,000 CPH IPC9850

YSM20WR Dual Lane
Max PCB size width 2 x W 356 mm
Single lane use max L 810 x W 662 mm

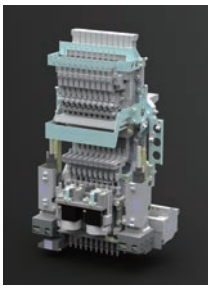
Maximum feeder count
140 fixed / 128 Feeder exchange system

The YSM20R brings the 1-head solution yet to a higher level making it the world's fastest all-purpose surface mounter

The two types of new heads are developed with the ideal of the "one-head solution" concept, which allows compatibility with a wide range of components at high speeds without the need for head replacement. High-speed general-purpose heads can be used for ultra-small (0201 mm) chip parts.

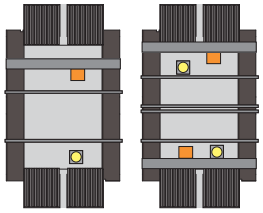
HM High-speed multi-purpose head (10 nozzles)

This universal type head made for high-speed mounting and versatility supports from ultra-tiny chips of 0201 (mm) to large-size components of 55 x 100 mm and height of 15 mm.



Beam variations available in 2 types

Ideal for setting up a flexible mounting line. For having both good mounting performance and versatility, the *Z:LEX* offers a common platform selectable from 1-beam and 2-beam for an x-axis configuration to match your budget.



FM Flexible multi-purpose head (5 nozzles)

Super wide-range type head supports force control, and handles a broad spectrum of components from ultra-tiny chips of 03015 mm to ultra-large components of 55 x 100 mm and tall components of heights up to 28 mm.

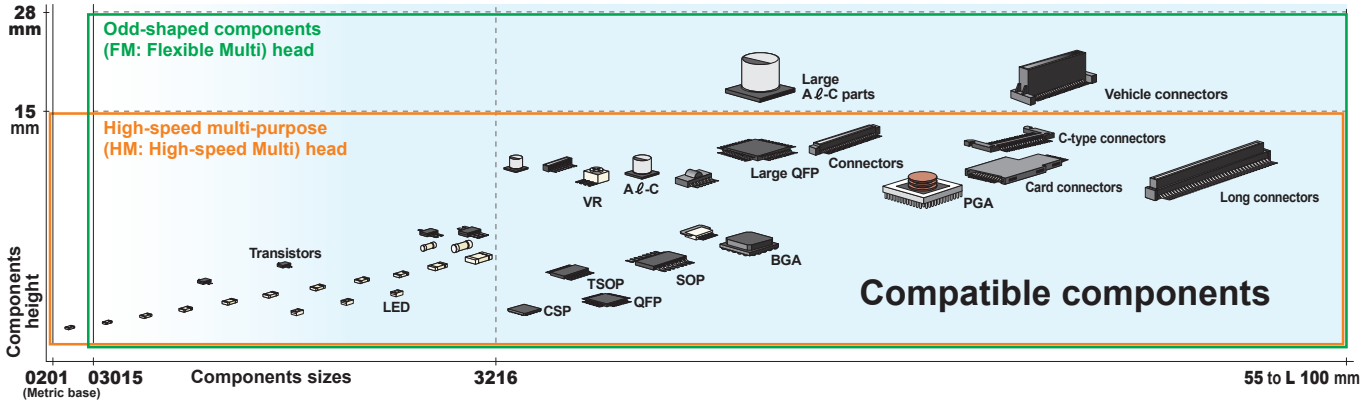


Superb mounting performance

95,000 CPH Champion
66,000 CPH IPC9850

Besides incorporating an advanced new servo system employing high-speed control technology, this mounter also has a newly designed z-axis linear motor. A new type wide-scan camera increases and expands recognition capability to support high speed mounting of parts up to 12 mm in size. Also, use of side lighting gives high-speed recognition of ball electrode parts such as CSP (chip scale packages) and BGA (ball grid arrays).

Limitless expansion becomes reality: wide support capabilities!



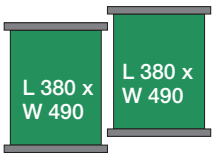
Handling large PCBs

Z:LEX YSM20R you can select a single-lane conveyor or dual stage conveyor on 2-beam system, to match the PCB size and production volume you need.

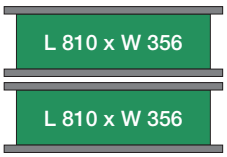
Z:LEX YSM20WR configurations support a wide range of PCB sizes up to L 810 x W 662 mm (maximum 1 lane used) or two boards up to L 810 x W 356 mm (dual lane).



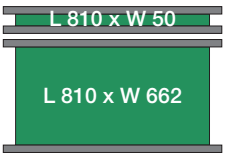
Dual stage, single lane
(1 PCB conveyance)



Dual stage
(2 PCB conveyance)



Dual lane, conveys 2 boards
with identical widths



Dual lane, conveys 2 boards
of different widths

Many high-end functions included as standard features

Side-view function

Detects pickup status and component's presence with no time loss.



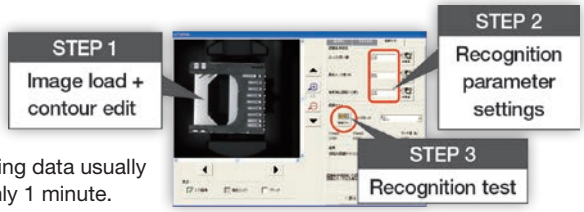
Nozzle cleaning station

Automatic cleaning function, passing high-pressure air through spline and nozzle, keeps nozzles clean for extended periods.



High-speed smart recognition

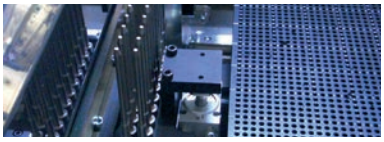
Highly robust "High-Speed Smart Recognition" that also creates recognition data for custom or unique components in a short time is now standard functionality.



Generating data usually takes only 1 minute.

Automatic pin support

Automatically change-over the support pin's location according to the program.



Multiple part supply devices offer an increasing efficiency level matching your budget



Newly developed and designed ALF (Auto Loading Feeder)

Newly developed ALF, Auto Loading Feeder, can supply tape-mounted parts just by inserting a tape without stopping the machine. The unique center open technique from Yamaha drastically reduces part pickup errors that occur from static electricity and the residue when peeled from the tape. No recovery of top tape is needed which vastly increases the operating rate.



Nonstop feeder carriage exchange system

A cover with shutter was mounted on the pickup part of the opening used during carriage clamp and release. The shutter automatically closes when the carriage is detached so that carriages can be exchanged without stopping the machine. This improve the machine productivity.



ZS feeder

Also supports thin, light-weight, compact, single lane type motorized intelligent feeders. Customer can select from non-stop feeder replacement function specs. Specs also support conventional SS/ES feeders.

sATS30NS Auto Tray Sequencer (ATS) for nonstop tray replacement

A new function has been added to the sATS30 Auto Tray Sequencer for automatic tray exchange and component feed. This new function automatically ejects pallets with empty trays during operation and feeds pallets with new trays into the machine. Operator can remove the pallet with empty tray and replenish pallet with full tray and press feed button. Pallet will automatic be supplied into the magazine. The magazine can be exchanged during changeover without stopping automatic operation.


sATS30


cATS10


sATS30NS

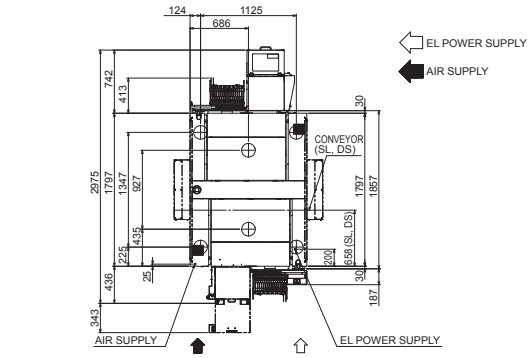
Specifications	*Z:LEX* YSM20R	YSM20WR
PCB size range	Single lane L 810 mm x W 490 mm to L 50 mm x W 50 mm Dual stage Note: For X-axis 2-beam option only 1 PCB conveyance: L 810 mm x W 490 mm to L 50 mm x W 50 mm 2 PCB conveyance: L 380 mm x W 490 mm to L 50 mm x W 50 mm	Dual lane Same type PCBs*: L 810 mm x W 356 mm to L 50 mm x W 50 mm Different type PCBs: up to L 810 mm x W 662 mm Same type PCB**: L 810 mm x W 280 mm to L 50 mm x W 50 mm Different type PCBs: up to L 810 mm x W 510 mm
Head/applicable components	HM high-speed multi-purpose head (10 nozzles): 0201 mm to 55 x 55 mm, L 100 mm, H 15 mm FM flexible multi-purpose head (5 nozzles): 03015 mm to 55 x 55 mm, L 100 mm, H 28 mm	
Mounting accuracy	FM head with force control up to 30 N on each head Cpk ≥ 1.0 = 0.035 mm; 3σ ± 0.025 mm	
Mounting capability	X axis 2-beam: 2 x HM head 95,000 CPH / 66,000 CPH IPC 9850 2 x FM head 34,000 CPH / 30,000 CPH IPC 9850 X axis 1-beam: 1 x HM head 42,000 CPH / 28,000 CPH IPC 9850 1 x FM head 17,000 CPH / 14,000 CPH IPC 9850	X axis 2-beam: 2 x HM head 81,000 CPH / 55,500 CPH IPC 9850*
Number of component types	Tape reel: 140 fixed feeder plates, 8 mm width Tape reel: 128 feeder carriage exchange, 8 mm width Tray: 30 types with fixed sATS30 or sATS30NS installed Tray: 10 types with tray carriage exchange (max. 2 per system)	
Power supply Air supply source	3-phase, AC 200/208/220/240/380/400/416 V ±10 %, 50/60 Hz 0.45 MPa or more, in clean, dry state	
External dimension (excluding projections)	L 1,374 mm x W 1,857 mm x H 1,445 mm	L 1,374 mm x W 2,110 mm x H 1,480 mm
Weight	Approx. 2,050 kg	Approx. 2,500 kg

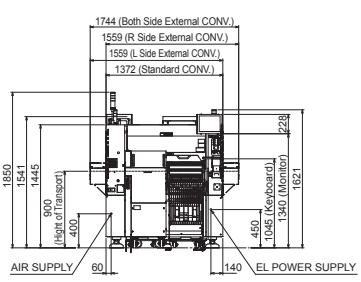
* When using conveyor separation specifications of 787 mm between 1 to 4 lanes.
** When using conveyor separation specifications of 630 mm between 1 to 4 lanes.

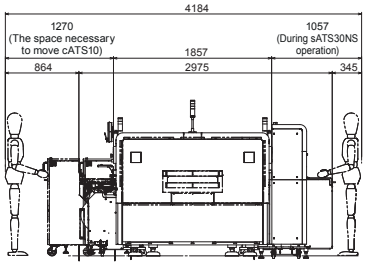
Full range of options

- HM or FM head
- Fixed feeder banks
- Standard Feeder exchange System (FES), non-stop feeder exchange FES or non-stop FES carts
- Coplanarity camera
- Automatic pin support
- Tray handing: cATS10, sATS30 or sATS30NS
- Manual tray 2 or 4 JEDEC trays
- UPS system
- Extension conveyor
- Yamaha Factory Tools
- Yamaha Intelligent Factory

Specifications and appearance are subject to change without prior notice.







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