## Specifications

### PCB Transfer Height

<table>
<thead>
<tr>
<th>Model</th>
<th>Σ-F8S</th>
<th>Σ-G5S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicable PCB</td>
<td>Single lane: L330 x W250 to L50 x W50mm (Option: L381 x W510 to L50 x W50mm)</td>
<td>Single lane: L610 x W510 to L50 x W50mm (Option: L1,200 x W510 to L50 x W50mm)</td>
</tr>
<tr>
<td>Dual lane: L330 x W250 to L50 x W50mm</td>
<td>Dual lane: L610 x W250 to L50 x W84mm (Single conveyance) L610 x W415mm (Dual conveyance)</td>
<td></td>
</tr>
</tbody>
</table>

### Head / Applicable components

<table>
<thead>
<tr>
<th>Model</th>
<th>Σ-F8S</th>
<th>Σ-G5S</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-speed head</td>
<td>0201 CHIP to 4.3 x 3.4mm, Height 2.0mm or less</td>
<td>High-speed multi-purpose head</td>
</tr>
<tr>
<td>High-speed multi-purpose head</td>
<td>03015 CHIP to 33mm square, Height 12.7mm or less</td>
<td>Multi-Functional Head</td>
</tr>
</tbody>
</table>

### Mounting capability

<table>
<thead>
<tr>
<th>Model</th>
<th>Σ-F8S</th>
<th>Σ-G5S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting capability</td>
<td>High-speed head x 4 specs: 150.000CPH (Dual lane) 136.000CPH (Single lane)</td>
<td>High-speed multi-purpose head x 2 specs: 75.000CPH (Single lane / Dual lane)</td>
</tr>
</tbody>
</table>

### Mounting accuracy

(Under optimum conditions as defined by Yamaha Motor when standard evaluation materials are used)

<table>
<thead>
<tr>
<th>Model</th>
<th>Σ-F8S</th>
<th>Σ-G5S</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-speed head</td>
<td>±25μm (3σ)](140,000CPH)</td>
<td>High-speed multi-purpose head: ±25μm (3σ)](70,000CPH)</td>
</tr>
<tr>
<td>0201/03015</td>
<td>±36μm (3σ)](150,000CPH)</td>
<td>03015/0603: ±30μm (3σ)](75,000CPH)</td>
</tr>
</tbody>
</table>

### Number of component types

<table>
<thead>
<tr>
<th>Model</th>
<th>Σ-F8S</th>
<th>Σ-G5S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. 80 types (conversion for 8mm tape feeder)</td>
<td>Max. 120 types (conversion for 8mm tape feeder)</td>
<td></td>
</tr>
</tbody>
</table>

### Power supply

3-Phase AC200V ±10% 50/60Hz

### Air supply source

0.45 to 0.69MPa (4.6 to 7kgf/cm²)

### External dimension

<table>
<thead>
<tr>
<th>Model</th>
<th>Σ-F8S</th>
<th>Σ-G5S</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 1,280 x W 2,240 x H 1,450mm (excluding projections)</td>
<td>L 1,280 x W 2,240 x H 1,450mm (excluding projections)</td>
<td></td>
</tr>
</tbody>
</table>

### Weight

<table>
<thead>
<tr>
<th>Model</th>
<th>Σ-F8S</th>
<th>Σ-G5S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx. 1,940kg</td>
<td>Approx. 1,800kg</td>
<td></td>
</tr>
</tbody>
</table>

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**SMT Innovation**

**Σ series**

**Premium Modular**

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**PCB ASSEMBLY SYSTEM**

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**Σ-F8S External dimension**

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**Σ-G5S External dimension**

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The “1-head solution” rotary head provides speed, versatility and high operating ratio.

**Σ-F8S**
- Fastest speed in its class! Produces 150,000 CPH with 4-beam & 4-head
- Super-high speed productivity! 150,000 CPH 25μm (under optimum conditions as defined by Yamaha Motor)
- Overdrive motion delivers streamlined high-efficiency production
- 2-beam & 2-head ensures high speed and versatility, supports wide range of components
- High-speed coupled with high accuracy! 75,000 CPH 25μm (under optimum conditions as defined by Yamaha Motor)

**Σ-G5S**
- Overdrive motion (Σ-G5S)
  - Simultaneous mounting by opposing heads promises high-efficiency production!
  - Mutual pickups by opposing heads makes both heads be able to pickup all components in both front and rear supply area. Both heads can share units such as multi-stage tray feeders, coplanarity checkers, tape feeders and nozzle station, with no restrictions on component placement.

**Feature 1** Overdrive motion delivers streamlined high-efficiency production

**Feature 2** Direct drive head gives high-speed & high-accuracy
- High-speed one-by-one pickup & mounting: Using 15 nozzles per head produces 37,500 CPH which is the top industry production level!
- Rotary direct drive head has simple design using no external drive parts such as gears or belts yet gives high-accuracy mounting.

**Feature 3** Even on rotary heads, Yamaha gives the 1-head solution!
- Even on rotary heads, Yamaha gives the 1-head solution!
- Even on rotary heads, Yamaha gives the 1-head solution!

**Feature 4** The Super Loading Feeder totally innovates components supply tasks!
- Super Loading Feeder
  - Auto-loading lowers the burden on the operator so that “anyone, anytime, can easily set” components for feed and supply.
  - Supports continuous non-stop operation and needs no splicing!
  - Non-peeling type cover prevents static charges, dust, and having to collect the cover tape.

**Components sizes**
- Σ-F8S: 4.3×3.4mm 33x33mm 44x44mm 72x72mm 150x26mm
- Σ-G5S: 4.3×3.4mm 33x33mm 44x44mm 72x72mm 150x26mm

**Applicable components**
- Σ-F8S: 0201 to square 33mm
- Σ-G5S: 03015 to large-size components

**Full range of feeder and supply device options to match your production format**
- Feeder carriage exchange
- Multi-stage tray feeder (Σ-G5S)
- Coplanarity checker (Σ-G5S)
- Flux coater unit
- ACSV (Advanced Component Validation)
- LISA (Line Information Support & Administration)
- Application software