



A flip-chip bonder for high-speed, high-quality placement of bare ICs for cutting-edge devices

MD-P300 Flip-chip Bonder

The MD-P300 Flip-chip Bonder is process-flexible, combining flip-chip and thermosonic bonding in a single, small-footprint solution. The MD-P300 contributes to the cost-effective production (high yield, high throughput) of value-added devices. The MD-P300 can achieve high speed and high accuracy bonding through its low gravity point and lightweight bonding head. The MD-P300 supports 300 mm (12") wafers, and is an ideal solution for COB hybrid assembly in combination with an in-line Panasonic SMT placement machine. The MD-P300 is capable of fast cycle times and a placement accuracy of $\pm 5 \mu\text{m}$ at 0.5 seconds per IC (dry run) - with thermosonic processes at 0.65 seconds, including process times.

Key Features

The basic structure comprises fixed-point pickup and placement that supports supply of wafers up to $\varnothing 300 \text{ mm}$

Process change is possible by switching the bonding tool (Compatible with GGI/C4/TCB)

High-precision placement of $\pm 5 \mu\text{m}$ is achieved using the placement nozzle where the chip backside recognition result obtained by a flip camera is feed-forwarded to handling

For productivity, high-speed placement of 5,500 CPH (production output per hour) is achieved

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<https://ap.connect.panasonic.com/vn/vi/md-p300-flip-chip-bonder>

Model Number	NM-EFF1 C
Placement Accuracy	XY (3 σ at Panasonic conditions) : $\pm 5 \mu\text{m}^{*1}$
Substrate dimensions	L 50 mm \times W 50 mm to L 330 mm \times W 330 mm (Heating specifications : L 330 mm \times W 220 mm)
Die dimensions (mm)	L 1 mm \times W 1 mm to L 25 mm \times W 25 mm (Thermosonic : L 7 mm \times W 7 mm)
Die Supply	Wafer frame 12 inches (Option : 8 inches)
Bonding Load	VCM head : 1 N to 50 N (Option : 2 N to 100 N)
Head Heating	Thermosonic : Up to 300 °C
Substrate Heating	Constant heating , Up to 200 °C (Heating bonding stage specifications : Max.substrate size L 330 mm \times W 220 mm) ^{*2}
Power Source	3-phase AC 200 V \pm 10 V , 50 / 60 Hz , Up to 4 kVA (Up to 7 kVA for heating specification) ^{*3}
Pneumatic Source	0.4 Mpa , 50 L / min (A.N.R.) (Up to 150 L / min for full-featured machine including cooling air)
Dimensions (mm)	W 1 380 mm \times D 1 640 mm \times H 1 430 mm (without loader / unloader)
Footnote Description	Please refer to the specifications on details. <ol style="list-style-type: none"> 1. The described productivity and placement accuracy may dier depending on the conditions of use. 2. Maximum setting temperature dier depending on the maximum substrate size. Please contact us individually. 3. 3-phase 208 / 220 / 380 / 400 / 415 / 480