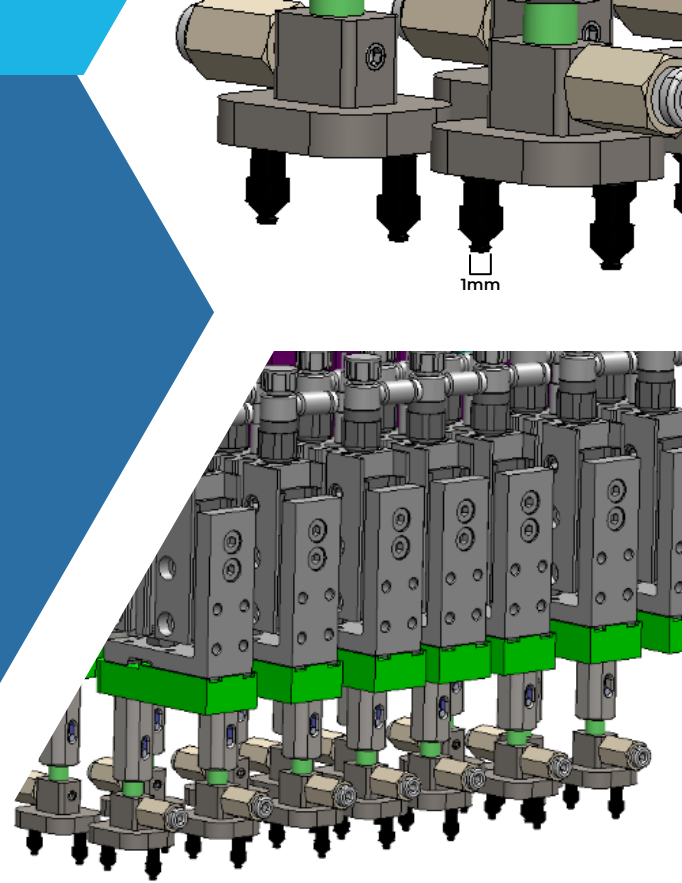


SMALL PART HANDLING

Increasing Operator Efficiency,
Quality, and Throughput



Why Automate Small Part Handling?



Obtain the ability to handle small parts (1.5mm) with small allowable contact areas for high volume assembly manufacturing



Eliminates the tedious process for operators utilizing tweezers and handling parts



Achieves accuracies previously unachievable with human operators

Machine Capabilities

- Small suction head arrays that carry multiple parts at once
- Fine motor control to set up downstream process
- Vision systems used to help with fine alignment

Performance Impact Example

- Capable of aligning within a few microns
- Five operators were assembling 2500 parts per day: 500 per shift
- Improved throughput to 1,850 units per hour; or 37,000 parts per day when two 10-hour shifts are worked
- Resulted in ~15x increased efficiency
- Moved four operators to a higher value-add position for job satisfaction
- Reduced the poor quality of parts and increased yield by 30%