

# CT<sub>2</sub>



## Flexible Manufacturing Tool

The proven *CT<sub>2</sub>* delivers remarkable flexibility and dependable output in one fully functional assembly cell. *CT<sub>2</sub>* offers reliable positional accuracy and speed through advanced linear motion and vision technology. Configured as a stand-alone instrument or integrated with your production line, *CT<sub>2</sub>* is the ideal choice for process development, line validation and a wide range of semi-conductors, electronics and medical device assembly applications.

## Flexible Upgradable

*CT<sub>2</sub>* provides industry-leading flexibility in a pick/place platform. Dual heads and a full complement of upward- and downward-looking cameras provide a base for multiple machine configurations while extensive material handling capability allows conveyors, feeding systems, dispensing modules and process tooling. Easily adapted and reconfigured to meet the specific requirements of new production challenges, the *CT<sub>2</sub>* provides excellent investment protection through a wide range of upgrade options.

## Reliable Quality

For demanding semiconductor packaging and module assembly processes, the *CT<sub>2</sub>* has a proven, reliable track record as a manufacturing workhorse. Combining linear motors, low part count and a simple machine design minimizes performance loss and assures long-term uptime. Quality and safety features meet or exceed Semiconductor Equipment and Materials International's (SEMI) Safety Guidelines as well as CE marking requirements.

## Capable Customizable

Combining a linear motion gantry with an industry proven controller and amplification system enable the configuration of motion speed, acceleration and direction for all axes. Maintaining speed along with the ability to customize new system settings is accomplished through programmable move paths and user-definable process steps.



Preform and Heatsink  
 Placement Fiber Optic  
 Lens/Lid Assembly  
 Epoxy/Flux Dispensing  
 Substrate I/O Inspection  
 Biochip Development  
 Substrate Ball Attach  
 Lid/Clip Placement MEMS  
 Assembly MCM Assembly  
 Die Placement Flip Chip

## CT<sub>2</sub> Specifications

### Transfer/Placement Heads

	Placement pressure range 0.22lbs (0.1 kg) to 4.4lbs (2.0 kg)
	Spring loaded compliant tips are used for lower force requirements
<b>Options</b>	Programmable Z-speed, pressure and dwell time
	Optional end-of-arm tooling equipment
	LaserAlign optical in-flight alignment of components up to 32mm (1.26")
	Vacuum nozzles, die collets, custom tools

### Tray/Process Carriers/Substrate Handling

<b>Dimensions</b> (x, y)	3" x 2 (75mm x 51mm) up to 18" x 20" (457mm x 508mm) Subject to process configuration
<b>Types</b>	Auer, JEDEC (or similar design), BGA, graphite boats, custom carriers, lead frames, strips, PWBs, clipping, and custom part securing
	Bi-directional conveyors (single or dual)

### Components

<b>Dimensions</b>	<b>Minimum:</b> 0.01" x 0.01" (0.25mm x 0.25mm) from waffle pack, 0.04" x 0.04" (1.02mm x 1.02mm) from wafer
	<b>Maximum:</b> 3" x 3" (75mm x 75mm) Consult factory for specific size and weight >1 kg

### Performance

<b>Placement Accuracy</b> X, Y	0.001" (0.025mm) Z Normally compliant All values are 3 sigma values using local fiducial vision tools
<b>Encoder Resolution</b> X, Y	0.000008" (0.002mm) Z 0.000004" (0.0010mm) Theta 0.005 degrees
<b>Placement Rate</b>	800 - 2000 UPH (subject to process)

### Standard Component Handling and Feeding Systems

Pallet stacker/destacker  
 Wafer die ejector  
 Tray feeders (waffle pak, gel pak, custom)  
 Label feeders  
 Static platforms  
 Tape and reel feederbanks

### Options

Auto vacuum tip change rack  
 Barcode reader and writer  
 Custom under-board support  
 Epoxy and adhesive dispense heads  
 Flux applicators

### Dimensions and Weight

<b>Footprint</b>	41.3" W x 45.5" D x 65.0" H (1.04m x 1.16m x 1.65m)
<b>Work Envelope</b> (x, y, z)	22" x 26" x 3.5" (559mm x 660mm x 89mm) Subject to process configuration
<b>Weight</b>	2500 lbs (1134 kg)

For more information:  
 Contact us at 1-919-212-1279 or visit our website at [www.arconparts.com](http://www.arconparts.com)