

# *Cencorp Raptor*

Odd-form

*Designed for mass production environments*

**The completely new Cencorp Raptor is a true high volume machine. Designed to place small through hole components with high speed gives you excellent return of investment.**

The Cencorp Raptor forms a new type of odd-form machine in the well known Cencorp product portfolio. Equipped with a fast dual head pick and place robot this machine will be an ideal work horse for the mass production lines.

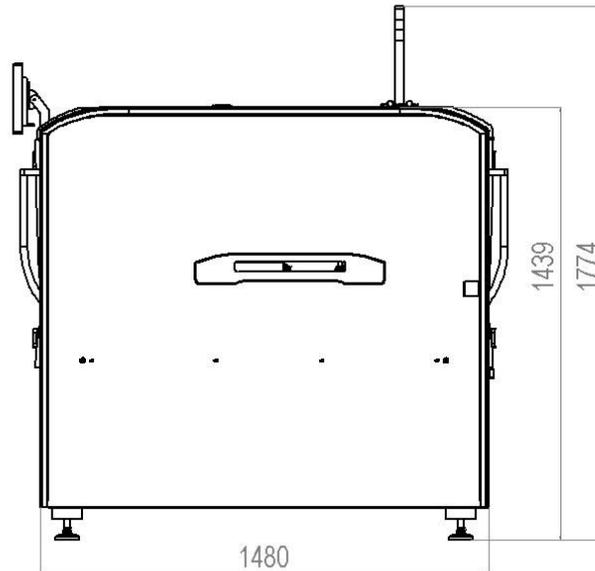
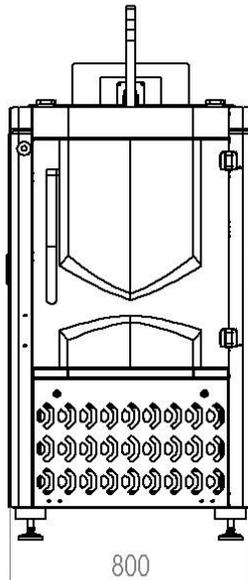
The machine is capable of holding up to 6 feeders of all standard and custom feeder types offered by Cencorp except tube feeders. Panels are supported from underneath to ensure a high quality process. Radial components can be preformed in the feeders to hold them in position in the panel without clinching.

With a maximum placement capacity of up to 5100 cph this machine sets a new standard in the through hole placement market.



# Cencorp Raptor

## Technical Data



### General

Graphical Touch Screen User Interface	
Operating system:	Windows
Motion controller:	Omron
Energy requirements:	230 VAC / 50 Hz
Branch circuit size:	16 A
Power consumption:	1,5 kVA
Compressed Air:	6 bar $\pm$ 10%, dry clean air
Air consumption:	100l/min
CE safety compliant	

### Board Handling

PCB transfer time:	4,4 sec (depends on the pcb size)
Transport height:	900 $\pm$ 20 mm
Transfer protocol:	SMEMA
Transfer speed:	Adjustable
Width adjustment:	Manually
Fixed rail:	Front or rear
PCB support:	Passive with vacuum table
PCB conveyor type:	Two segment
Transport direction:	L > R
Pass through conveyor:	Programmable
Top clearance:	40 mm
Bottom clearance:	35 mm
Edge clearance top:	6 mm
Edge clearance bottom:	4 mm
Conveyor soft stop and start as default	

### PCB specification

PCB Width:	50 – 300 mm
PCB Length:	50 – 310 mm
PCB Ratio:	0,8 (length $\geq$ 0,8 x width)
PCB Thickness:	0,8 – 3,2 mm
PCB Weight:	max 1,0 kg

### Board Support

Manually changeable product specific support plate with vacuum nozzles  
(No clinching)

### Feeders

Available feeder space:	480 mm
Feeder Ports:	6
Available Feeder Types:	AR (axial to radial), Axial, Radial, Tray, Bowl, Jumper and Tape feeders

### Component Handling

Dual Servo Gripper with automatic finger change and pneumatic pusher	
Gripper movement:	18 mm
Maximum component height:	30 mm
Finger exchange:	Automatic
Component detection:	Automatic
Collision detection:	Automatic
Comp. teaching:	Camera aided
Comp. pusher:	Manually exchangeable
Finger slots:	6

### Pick & Place Performance

Max axis speed:	2500 mm/s
Max acceleration:	25000 mm/s <sup>2</sup>
Capacity:	5000 CPH
Cycle time / component:	0,62 – 1,2 sec
Repeatability (X,Y):	$\pm$ 0,01 mm
Repeatability (W):	$\pm$ 0,01 °

### Machine Dimensions

Width:	800 mm
Depth:	1480 mm
Height:	1440 mm
Weight:	800 kg

### Robot working area

Y-travel:	956 mm
X-travel:	389 mm
Z-travel:	70 mm
W-travel:	285 deg

### Environmental Requirements

Operating temperature:	10 ... 40 °C
Operating humidity (RH):	30% ... 85%

### Machine Options

Transport direction:	R > L
Transport height:	950 $\pm$ 25 mm
Connectivity to customer production system	
Pneumatic gripper	
Vacuum gripper	
2-camera Active Vision:	
• Correction of PCB position	
• Correction of component position	

### Feeder Options

Radial feeder component lead forming, which ensures that components stay stable in the PCB before next process phase.