

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.

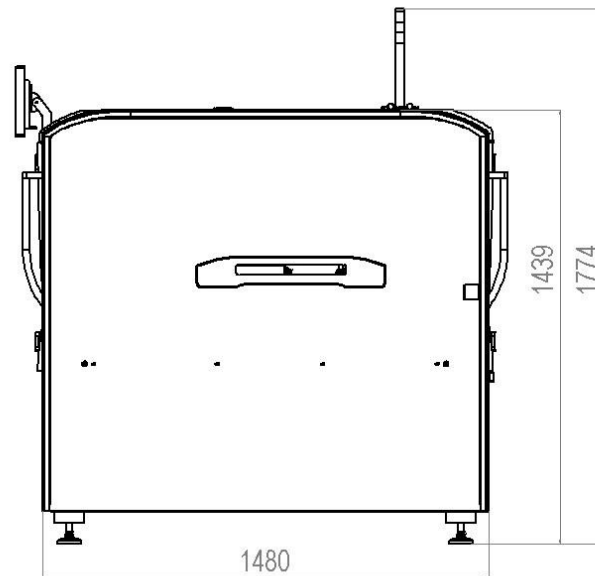
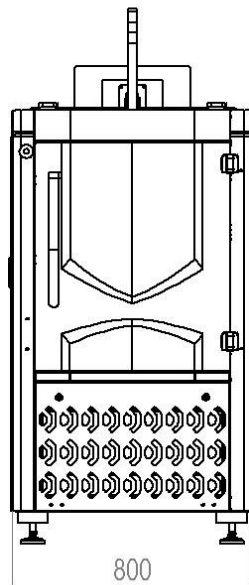
The machine is capable of holding up to 6 feeders of all standard and custom feeder types offered by Cencorp except tube feeders. Panels are supported from underneath to ensure a high quality process. Radial components can be preformed in the feeders to hold them in position in the panel without clinching.

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



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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/s²
 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.