

# cobra.

*High speed pick-and-place –  
The future in SMT assembly*



- 8-axis placement heads, up to 18'000 cph\*
  - Very large feeder capacity, up to 240 feeder lanes
  - Component range 01005 to 80x70 mm, height up to 25 mm
  - Intuitive, easy operation using the new platform ePlace
  - Job and quality management integrated
  - High speed placement head with real-time trajectory optimization
  - Changeover without downtime
  - hyQ-feeder for different tape sizes
  - FLX feeders can be re-used on Cobra
- \*max. placement speed



## Swiss made high precision machinery

Leading edge engineering technology, the most feeders per sqm in the marketplace, intelligent feeders and setup concepts, the largest board sizes together with the most compact system sizes and the software based on "eez technology" ensure highly efficient and economical SMT manufacturing for service providers and in-house production.

## Highly flexible and trendsetting

Cobra is the world's most modern SMT pick-and-place machine with an extraordinary large feeder capacity (240 intelligent feeder lanes pickable from all four sides) - developed and manufactured in Switzerland according to the highest quality criteria. Cobra is the first SMT pick-and-place system that combines the advantages of a highly flexible pick-and-place with the throughput of an 8-axes placer. State-of-art-material and its unique overall accuracy ensure highly efficient and economical SMT manufacturing.



Specifications		Cobra-8	Cobra-8C
Productivity	Theoretical speed / cycle time	21'000 cph / 0.17 s	
	Max. placement speed / cycle time	18'000 cph / 0.20 s	
	Speed according IPC9850	Chip: 12'500 cph	
	Changeover idle time	< 1min (loading job, adjust conveyor, restart production)	
Feeder	Feeder capacity (8mm tape)	240	120 to 200
	Feeder system	programmable, intelligent, cassette or single feeder	
Components	Component size range	01005-40x40 mm	
	Mass moment of inertia	60g x cm <sup>2</sup>	
	Max size with PC-VIS-MFOV	80x70 mm **	
	Min. lead pitch	0.3 mm (12mil)	
	Min. component height	>0.0mm	
	Max. component height	18 mm (25 mm **)	
Accuracy	Linear encoder resolution (x,y)	0.02 µm	
	Rotation axis resolution	0.007° (for all axes)	
	Overall placement accuracy XY Chips	45 µm (3σ)	
	Overall placement accuracy XY QFP 64/100	30 µm (3σ)	
PCB	Min. PCB dimensions	20x20 mm (0.8x0.8")	50x50 mm (2x2")
	Max. PCB dimensions	450x800 mm (17.7x31.5")	600x700 mm (23.6x27.6")
	PCB thickness	0.5 – 3.5 mm (0.02-0.13")	0.5 – 5 mm (0.02-0.2")
	Max. Board weight	-	4 kg (8.8 lb)
	Clearance below PCB	40 mm (1.57")	40 mm (1.57")
Machine dimensions	Machine footprint (WxL)	152x210 cm (59.8x82.6")	
	Operating floor space	232x290 cm (91.3x114.2")	
	Machine height	150 cm (59.0")/ 195 cm (76.7") incl. light tower	
	Machine weight	2650 kg (5840 lb)	
Supplies	Electrical	3x400 VAC/50Hz or 3x208 VAC/60 Hz	
	Power consumption	3 kW	
	Required circuit breaker	16 A/400 V or 20 A/208 V	
	Compressed air	6-7 bar, clean and filtered, dry, ISO 8573-1: class 3 (max part diameter 5 µm, dew point <-20°C, oil 1 mg/m <sup>3</sup> )	
	Air consumption	Max. 120 nl/Min. / 4 CFM	
	Air connection diameter	8 mm	

\* depending on boardsize

\*\* optional or on request