



Paloma Top Loader

Placing product into a carton, case or tray with the amazing speed and precision of a Delta Robot

Features and Benefits

Fast and Compact Design

- ▶ Up to 80 products/minute with 1 robot arm
- ▶ Up to 160 products/minute with 2 robot arms
- ▶ Up to 240 products/minute with 3 robot arms
- ▶ Simple integration into existing or new lines

Maximum Flexibility

- ▶ Only one controller to control up to 24 axis of motion (4 robots and conveyors)
- ▶ Production change over in 5 minutes with inexpensive change parts
- ▶ No tools required for change over
- ▶ Delicate product handling with vacuum cup or light-touch mechanical gripper end-effectors
- ▶ Each product can be uniquely positioned and orientated during the pick and place
- ▶ Randomly positioned and orientated products are packed with precision with the vision-guided option
- ▶ Advanced product tracking for precision pick and place when products and container are in motion
- ▶ Automatic recipe back up and restore feature in the event of power failure



Color Touch Screen HMI

- ▶ Intuitively menu driven windows to set-up, change-over and run different production configurations

Low Maintenance Robotics

- ▶ Designed for 3 shifts/day operation
- ▶ Composite materials provide strength, durability and long life
- ▶ No lubricants and no gear boxes above the product
- ▶ Robot arms are collapsible and remountable in 2 minutes
- ▶ Fixed position motors and no bending wires for longer life and higher speeds

Experience

- ▶ Over 1000 parallel axis Delta Robots in production today
- ▶ In-house design and manufacturing of the three major components: Controller, Robot, End-Effector
- ▶ PMMI certified training programs to assure faster return on your investment
- ▶ Extensive parts and technical support by Bosch Packaging Services



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Paloma Top Loader

Technical Data

Product Range	Minimum	Maximum
Length	15 mm (0.6")	300 mm (11.8")
Width	15 mm (0.6")	300 mm (11.8")
Height	1 mm (0.04")	120 mm (4.7")
Weight	10 g (0.022 lb)	1.5 kg (3.3 lb)

Product Input Requirement

Without vision-guided option

- ▶ Single-stream flow and packing precision is dependent on product orientation and position at the delivery to the Paloma
- ▶ Maximum 300 mm or 500 mm wide product flow

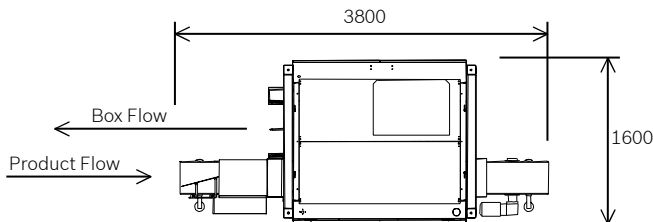
With vision-guided option

- ▶ Randomly oriented and positioned products can still be placed with precision
- ▶ Maximum 250 mm or 450 mm wide product flow when using vision

Requirement of Packaging Machine (Cartoner or Wrapper)

- ▶ The infeed must be as narrow as possible and positioned as close to the product supply conveyor as possible to minimize the robot trajectories and maximize robot performance
- ▶ If the speed control option is selected the packaging machine must be capable of allowing the Paloma to control its speed based on production flow

Paloma Top Loader Layout



Floorplan changes dependant upon number of robot arms.

Carton and Case Sizes

320 wide transport (with 500 wide product belt)

	Minimum	Maximum
Length	60 mm (2.4")	420 mm (16.5")
Width	45 mm (1.75")	320 mm (12.6")
Height*	25 mm (1")	300 mm (11.8")
Height**	25 mm (1")	500 mm (19.7 lb)

500 wide transport (with 300 wide product belt)

	Minimum	Maximum
Length	60 mm (2.4")	650 mm (25.5")
Width	275 mm (10.8")	550 mm (21.6")
Height*	25 mm (1")	300 mm (11.8")
Height**	25 mm (1")	500 mm (19.7 lb)

* Height includes cover flap if cover flap is in a vertical position and must be crossed by the robot(s) during the pick and place movement.

** More height is possible if products are able to be dropped into the case a maximum distance of 200 mm (7.8").

Available Options

- ▶ 1, 2, 3 or 4 robot arms with one controller dependant upon application
- ▶ Vision-guided to precisely pick and place randomly positioned and oriented product
- ▶ Convenient Dallas key operator authentication with data protection and programmable security levels
- ▶ Rotation of products to correct orientation with 4th axis of motion
- ▶ Grouping products by reflex pick before placing in tray, carton or case
- ▶ HMI swing arm
- ▶ Stainless steel construction

Robot speed is dependent on product size and weight. Not all products that fit in the product range can be packed at the maximum cycle speed. Check with sales support to determine the maximum cycle speed for your application.

Technical information is subject to change without notice.

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