

SIPLACE Matrix Tray Changer

HIGH VOLUME FEEDING OF LARGE COMPONENTS



The SIPLACE Matrix Tray Changer (MTC) is the ideal partner for manufacturers who process a broad range of in-tray components. With its large capacity and ultra-fast component handling the SIPLACE MTC improves effectively the machine utilization in your factory.

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The SIPLACE MTC's two independent tray elevators allow fully automatic setup and exchange of up to 100 JEDEC flatpack magazines, thus avoiding placement interruptions. The first elevator features 5 cassettes, each holding up to 6 magazines for 2 JEDEC trays each. The second elevator contains 4 cassettes, each with a capacity of 10 magazines for 1 JEDEC tray.

A unique feature of the MTC is that the carriers in the first elevator will not only accept standard JEDEC flatpack magazines, but as well many other types of flatpack magazines up to a size of 265 mm x 340 mm.

Many different component types can be set up in reserve trays and be refilled while the machine continues to operate, thus avoiding unnecessary standstill. A filling control provides information about the fill status and empty trays.

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Components are optimally distributed throughout the MTC by the SIPLACE setup optimization according to the "Best Performance" concept. It is also possible to load only one component type per tray to save time by exchanging complete empty trays.

In addition, MTC management data are available through SIPLACE Operator Information System (OIS). Pickup and placement are performed as quickly as with conventional feeders.

To achieve this, the magazine is automatically brought to the exact position where it can be accessed by the placement head.

The vision modules of Collect & Place Head or TwinHead check the picked component, then it is placed on the board. Sensors and control mechanism recognize missing or defect components and avoid a crash of a component with a cassette, when trays are moved in.

TECHNICAL DATA

Matrix Tray Changer (MTC) (L x W x H)	1305 mm x 600 mm x 1490 mm	
Weight of MTC in basic configuration	approx. 580 kg (with cassettes, flatpack carriers FPC and waffle tray carriers)	
Weight of MTC completely equipped	approx. 620 kg (with components)	
Replacement & setup changeover table – MTC	approx. 1 h	
Exchange MTC – MTC	approx. 2 min	
Option	JEDEC ridges	
	Elevator 1 (XL)	Elevator 2
Cassette (L x W x H)	391.2 mm x 305.6 mm x 93.3 mm	352.7 mm x 154.8 mm x 133.8 mm
Weight cassette without FPC	1.70 kg	1.35 kg
Weight cassette completely equipped	approx. 11 kg	approx. 7.5 kg
Number of cassettes per elevator	5	4
Flatpack carriers (FPC) (L x W x H)	370 mm x 295.8 mm x 7.8 mm	371 mm x 146 mm x 10.1 mm
Weight of FPC without flatpack	850 g	150 g
Number of FPCs per cassette	6	10
Total number of FPCs	30	40
Max. height of component incl. FPC	31.5 mm (> 8.5 mm leave 1 level free, > 19.5 mm leave 2 levels free)	19.5 mm (> 8.5 mm leave 1 level free)
Changeover time (over 5 levels)	approx. 2 s	approx. 1.5 s

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