



CHIPBOARD STYLE TRAY PACKING OVERVIEW

TYPES OF TRAY PACKERS

TOP LOAD STYLE TRAY PACKERS

Top Load Style Tray Packers are very prominent in the display POP market. They are very effective when handling high speed applications such as stick packs and pouches. Most applications for top load tray packing involve either a Delta 3 Robot or a Gantry Robot. Product is typically being conveyed non-uniformly making a Delta 3 Robot the preferable solution. Types of Top Load Style Tray Packers in the packaging industry are as follows:

- » Manual Load (Economical and Flexible)
- » Gantry Robot (Robust and Improved Efficiency)
- » Delta 3 Robot (Can handle high speed applications)



END LOAD STYLE TRAY PACKERS

End Load Style Tray Packers are typically advantageous when handling product such as cartons, bottles, cans, and pails. They are usually used on glue or tuck style trays with minor and major flaps. They are beneficial as they incur a very small footprint and can usually complete three processes on one machine (tray erection, loading, and closing). Different types of End Load Style Tray Packers in the end of line packaging industry include:

- » Manual Load (Economical and Compact)
- » Semi-Automatic (Flexible and Efficient)
- » Fully Automatic (High speed and reduced labor costs)



TRI SEAL STYLE TRAY PACKERS

Tri Seal Style Tray Packers are used when the tray requires a three flap closure. Usually, these systems require three separate machines and can incur a large footprint. However, these systems can be very beneficial for areas in shelf and retail ready packaging. This type of packaging can also double as a shipper which further reduces material cost. Tri Seal Style Tray Packers typically come in three different styles:

- » Semi-Automatic (Economical and Flexible)
- » Integrated Delta 3 Robot (High speed and reduced labor)
- » Gantry Robot (Economical and Efficient)



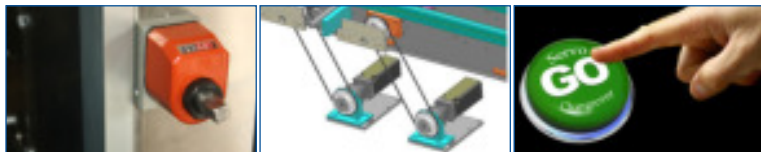
CHIPBOARD STYLE TRAY PACKING OVERVIEW

KEY FEATURES

CHANGEOVER

Product and Tray changeover is a key feature when trying to improve production and efficiency. Generally, there are three types of changeover: manual, semi-automatic and fully automatic.

	Time (Minutes)
1. Manual	20-30
2. Semi-Automatic	10-20
3. Fully-Automatic	2-10



1. Manual

2. Semi-Automatic

3. Fully-Automatic

LOADING

Typically, Delta 3 Robots are used for applications where the product is coming non-uniformly where as gantry robots are used for product being conveyed uniformly. Side pushers are used for product such as bottles, vials, and jars.

	Speed (PPM)	Cost
1. Delta 3 Robot	10-500	High
2. Gantry Robot	10-200	Low
3. Side Pusher	10-100	Low



1. Delta 3 Robot

2. Gantry Robot

3. Side Pusher

MAGAZINE

Magazines are used to hold tray blanks. Three styles are generally used including: Flat Stack Magazines™, Vertical Tray Blank Magazine, and 19 inch magazines.

	No. Trays
1. Flat Stack Magazine™	500
2. Vertical Tray Blank Magazine	300
3. Standard Magazine	300



1. Flat Stack Magazine™

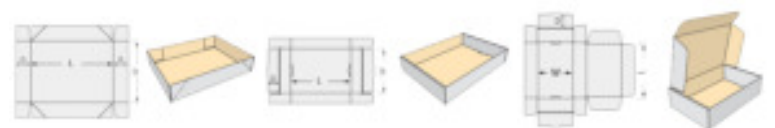
2. Extended Magazine (4 feet)

3. Standard Magazine

TYPES OF TRAYS

Numerous closure types are available on Tray Packers. Tray Packers can handle the following trays: Glue Style, Tuck Style, and Tri Seal.

	Glue System (Y/N)	Cost
1. Glue Style	Y	Medium
2. Tuck Style	N	Medium
3. Tri Seal	Y/N	Medium



1. Glue Style

2. Tuck Style

3. Tri Seal

FORMING TOOL

The correct forming tool can be beneficial when looking to minimize change parts and ensure quality seals.

	Footprint	Change Parts
Lugged Conveyor	Large	0
Male/Female Tool	Small	≥0
Bucket Conveyor	Medium	≥0

TRAY FEEDER

Generally, there are three types of tray feeders: Reciprocating, Rotary, and Mandrel Head Tray Feeders.

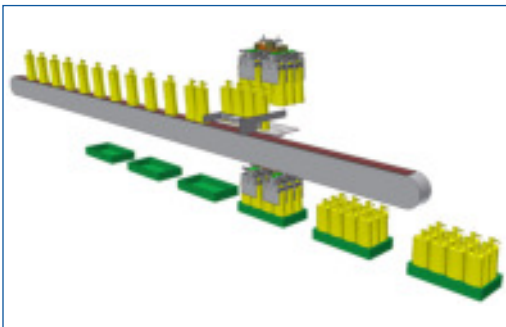
	Speed (TPM)	Cost
Reciprocating	10-30	Low
Rotary	10-100	Medium
Mandrel Head	10-38	High



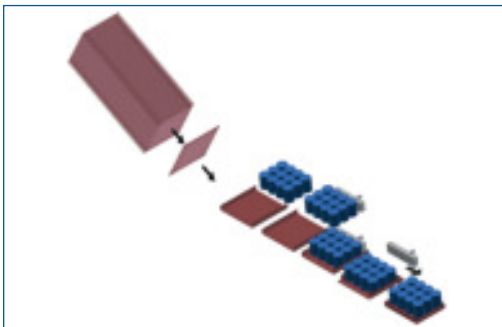
CHIPBOARD STYLE TRAY PACKING OVERVIEW

APPLICABLE MACHINERY

AFA Model	CHANGEOVER			LOADING			MAGAZINE			TRAY STYLE			FEEDER			FORMER		
	Manual	Semi-Automatic	Fully Automatic	Delta 3 Robot	Gantry Robot	Side Pusher	Flat Stack Magazine	Vertical Blank Magazine	Standard Magazine	Glue Style	Tuck Style	Tri Seal	Reciprocating	Rotary	Mandrel Head	Lugged Conveyor	Male/Femal Tool	Bucket Conveyor
CF-ELT Egg Tray Former and Tray Lidder	X	X	X						X	X			X	X				X
HD-TPA Heavy Duty Small Center Tray Packer	X	X	X	X	X	X			X	X				X		X		
MK-CTE Horizontal Self Locking Style Tray Former	X	X					X	X			X				X		X	
MK-CTF Compact Horizontal Glue Style Tray Former	X	X					X	X		X					X		X	
MK-CTP Compact Intermittent Motion Tray Packer	X	X	X	X	X	X			X	X	X		X	X		X		
MK-ITS Inline Triseal Carton Closure	X	X	X									X						
MK-TRS Integrated Compact Tray Packer and Shrink Bundler	X	X	X	X	X	X			X	X	X		X	X		X		
TL-GRT Top Load Cartesian Robot Tray Packer	X	X	X	X	X	X	X			X			X	X		X		



Top Load Style Tray Packer



End Load Style Tray Packer



Tri-Seal Style Tray Former