AFA Systems
Packaging Automation

END LOAD/SIDE LOAD STYLE CARTONERS

TYPES OF CARTONERS

HORIZONTAL CARTONERS

Horizontal Cartoners are the most commonly used cartoners in the end of line packaging industry. They are ideally suited for products that have a stable base and have one or two products in a carton. In addition, they can achieve very high speeds for high demand applications. Handling bulk product is generally more simple as it is much easier to collate product on a horizontal orientation. Types of horizontal cartoners in the packaging industry are as follows:

» Manual Load (Economical and Flexible)
» Semi-Automatic (Greater Control and Improved Efficiency)
» Fully-Automatic (Best Quality and Efficiency)

VERTICAL CARTONERS

Vertical Cartoners are typically advantageous when handling bottles, jars, and vials as the product damage is minimized. With Vertical Cartoners, you potentially eliminate long infeed systems as the product is generally in the correct orientation for loading. This allows users to minimize footprints and processes. Different types of vertical cartoners in the end of line packaging industry include:

» Continuous Motion Turret Loaders (200+ ppm speed)
» Intermittent Motion Top Load (Highly Flexible and Accurate)
» Manual Load (Economical)
» Integrated Delta 3 Systems (High and Accurate ppm)

SLEEVERS

Sleevers are used when dealing with products such as blister packs, cups of product and single pouches. Sleevers can also be modified to handle wrap around sleeves. The disadvantage of a wrap around sleeve is the glue system required for closure. Wrap around style sleeves however, have the benefit of generally using less carton material and handling. Sleevers are similar to horizontal cartoners and there are three types:

» Manual Load (Economical and Flexible)
» Semi-Automatic (Greater Control and Improved Efficiency)
» Fully-Automatic (Best Quality and Efficiency)

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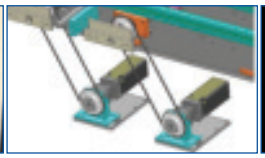
KEY FEATURES

CHANGEOVER

Product and Carton 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	40-50
2. Semi-Automatic	20-30
3. Fully-Automatic	2-10


1. Manual


2. Semi-Automatic

3. Fully-Automatic

SPEED

Knowing the correct speed is imperative to ensure that you will be using the correct feeder and infeed loading system. Generally, there are two types of feeders: reciprocating and rotary.

	Speed (CPM)	Cost
1. Rotary Feeder	10-500	High
2. Reciprocating Feeder	10-60	Low


1. Rotary Feeder


2. Reciprocating Feeder

MAGAZINE

Magazines are used to hold carton blanks. Three styles are generally used including: 8 foot extended magazines, 4 foot extended magazines and 19 inch magazines.

	No. Cartons
1. Extended Magazine (8 feet)	1500
2. Extended Magazine (4 feet)	750
3. Standard Magazine (19 inches)	300


1. Extended Magazine (8 feet)


2. Extended Magazine (4 feet)


3. Standard Magazine (19 linches)

TYPE OF CLOSURE

Numerous closure types are available on cartoners. Cartoners can handle the following closures: standard reverse tuck, air-plane tuck, glue style, gable top, hanger tab, and sleeve style.

	Glue System (Y/N)	Cost
1. Standard Reverse Tuck	Y/N	Low
2. Airplane Tuck	Y/N	Medium
3. Glue Style	Y	Medium
4. Gable Top	Y	Medium
5. Hanger Tab	Y	Medium
6. Sleeve Style	N	Low


1 2 3 4 5 6

CONTROL SYSTEM

Choosing the correct PLC is imperative to ensuring how much flexibility and control you require on your packaging system.

	#Servos	Flexibility
AB Control Logix	Greater than 8	High
AB Compact Logix	Less than 8	High
AB Micro Logix	No Servos	Low

INFEED TYPE

Generally, there are three types of infeeds: fully-automatic, semi-automatic, and manual.

	Speed (CPM)	Operators
Fully-Automatic	10-500	≥1
Semi-Automatic	10-100	>1
Manual	10-80	>1

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APPLICABLE MACHINERY

	CHANGEOVER			FEEDER		MAGAZINE			CLOSURE						CONTROLS			INFEED		
AFA Model	Manual	Semi-Automatic	Fully Automatic	Rotary Feeder	Reciprocating	Standard Magazine (19")	Extended Magazine (4')	Extended Magazine (8')	Standard Reverse Tuck	Airplane Tuck	Glue Style	Gable Top	Hanger Tab	Sleeve Style	AB Control Logix	AB Compact Logix	AB Micro Logix	Fully Automatic	Semi-Automatic	Manual
HD-CMA Heavy Duty Continuous Motion Autoload Cartoner	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x		x	x	
HD-IMA Heavy Duty Intermittent Motion Autoload Cartoner	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x		x	x	
HD-LSP Heavy Duty Linear Servopack Autoload Cartoner	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x		x	x	
MK-500 Manual Load Cartoner	x	x	x		x	x	x		x	x	x	x	x	x		x	x			x
MK-BIB Horizontal Bag In Box Autoload Cartoner	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	
MK-CML Horizontal Manual Load Cartoner	x			x	x	x	x	x	x	x	x	x	x				x			x
MK-CMS Horizontal Continuous Motion Autoload Sleever	x	x	x	x	x	x	x	x						x		x	x	x	x	x
MK-LSP Linear Servopack Autoload Cartoner		x	x	x	x	x	x	x	x	x	x	x	x		x	x		x	x	
MK-SML Servo Manual Load Cartoner	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x				x
MK-STK Intermittent Motion Stick Pack Cartoner	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x		x	x	
VC-IMC Vertical Manual Load Cartoner	x	x	x	x		x	x	x	x	x	x	x	x		x	x	x			x
VC-VCA Vertical Autoload Cartoner	x	x	x	x		x	x	x	x	x	x	x	x		x	x		x	x	