

## HOW SERVO CONTROLS WORK FOR YOU

An automatic horizontal cartoner is only as efficient as its product handling systems. At Tisma, we've developed a whole family of servo-controlled product metering devices that cover a broad range of applications. Some are shown here.



### SmartLoader™

Two or more chambers stacked vertically, each with sliding gates. Single product loads are timed through the chambers into the article buckets passing below, or the lower chambers may be used to accumulate multiple counts. Transfer conveyors are available to feed bags from VF/F/S machines with either the narrow or the long dimension leading.



### SmartFliter®

A vertically oriented starwheel which gently collates products such as cracker slugs with count and pack pattern flexibility. Twin SmartFliters® are used for layering. Patented.



### Sequential Transfer™

An extremely versatile system for collating products such as pouches, bags and cartons in single or multiple layers. Packages may be collated and transferred lying flat or on edge, in a variety of pack patterns. Patent pending.

### Handles a range of carton sizes

You may never change trays again! Flexo-Tray® article trays adjust up to 84%.

### Easy tray changeover

Simply dial tray width for your next article/carton combination. No tools, no time.

### Reduces product damage

Trays open wide for efficient product transfer, then progressively and gently orient and condition product for optimum loading.

### Minimal downtime

Flexo-Tray® saves valuable production time, cleanup and special storage.

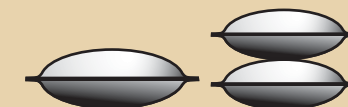
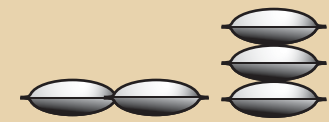
### High speed

Tisma's 600 Series cartoners achieve speeds up to 400 CPM.

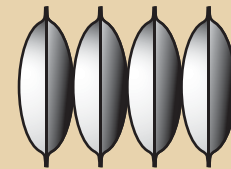
### Other efficiencies

Reduce product damage and downtime, plus save tray set adjustment, sanitation procedures, storage, labor, additional maintenance. You're in full control.

## SOME OF THE MANY PACK PATTERNS POSSIBLE WITH FLEXO-TRAY



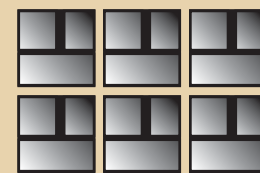
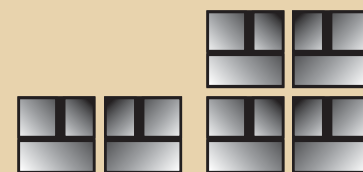
Bagged items such as cereals, cookies, crackers and snacks.



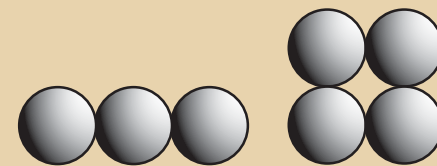
Small pouches on end



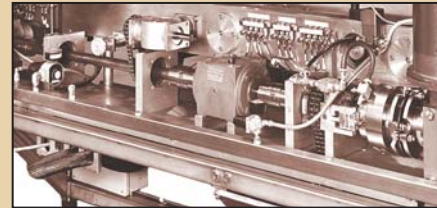
Small rectangular packages such as cartons or candy bars.



Wrapped items such as saltines.



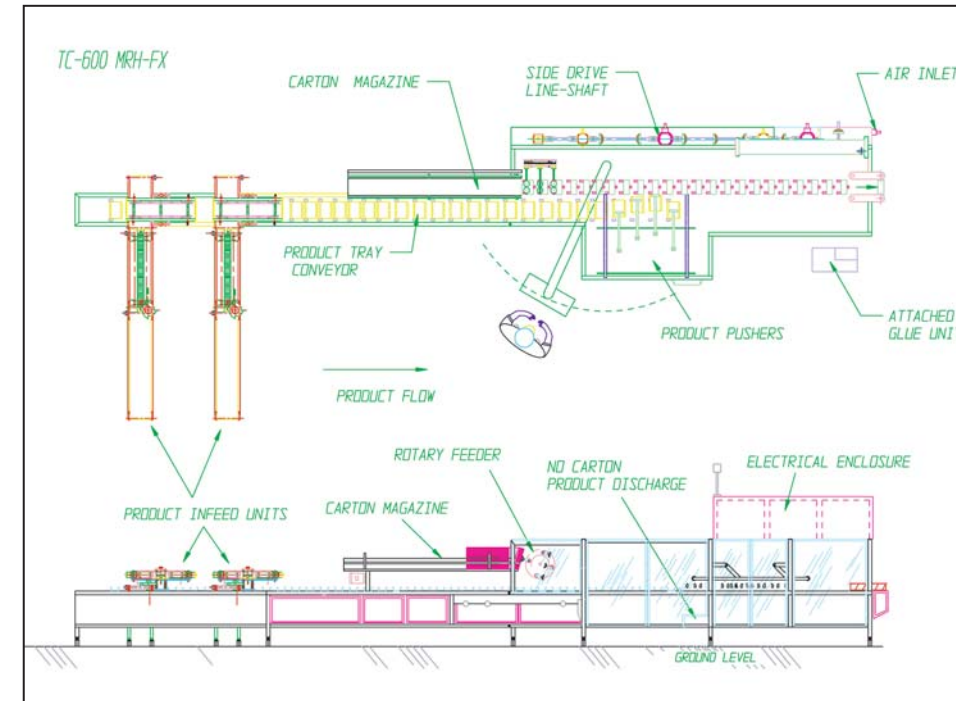
Wrapped, round packages such as crackers and cookies.



Flexo-Tray® robust line shafts are side-mounted for easy accessibility

## FLEXO-TRAY

Tisma's servo-controlled product metering systems covers a wide range of applications and also include smartbelts, timing starwheels, overhead sweeps, and lowerators. Mechanical timing is offered when it is more cost effective. Our goal is to provide our customers with cartoning systems that are intelligent, efficient, flexible and reliable.



Engineers and builders of horizontal, vertical, flat-blank and shelf-pack cartoners and modular cartoning systems.

For a detailed presentation please call 847.427.9525 or fax 847.427.9550



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847.427.9525 fax 847.427.9550 www.tisma.com

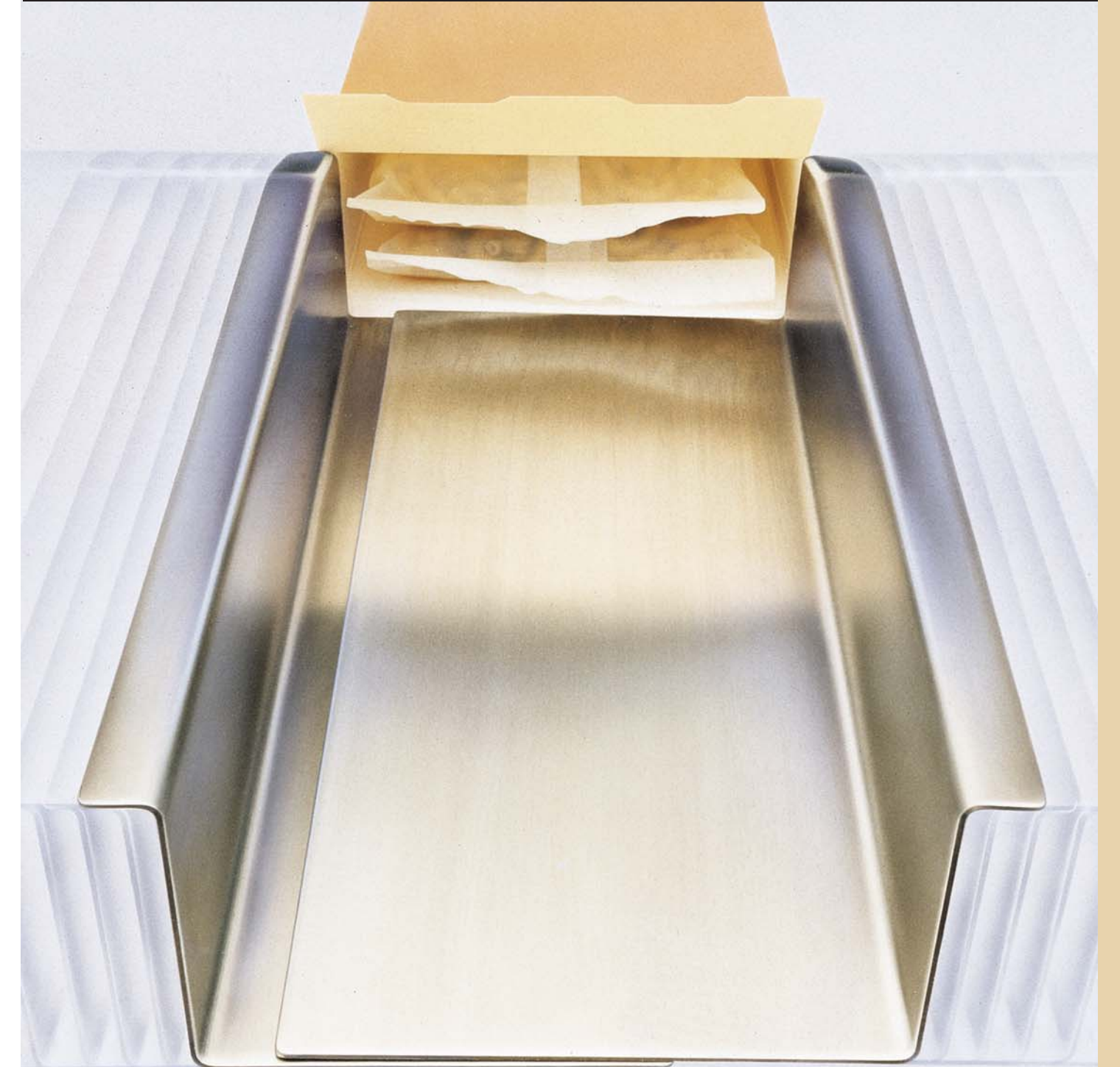
# Flexo-Tray®



Ultimate product

control in horizontal

cartoning



MEMBER  
PMMI  
USA

MEMBER  
PMMI  
USA

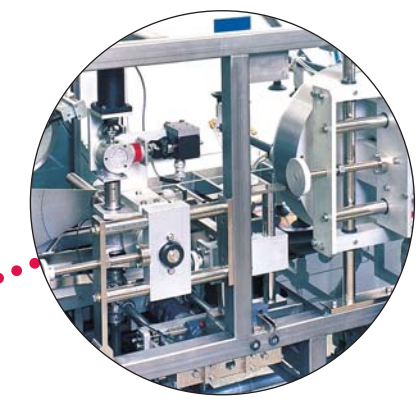
**FLEXO-TRAY'S  
'LIVE' ARTICLE  
BUCKETS  
OFFER YOU  
TOTAL  
PRODUCTION  
CONTROL**

**A SIMPLE DESIGN  
CONCEPT BUT...**

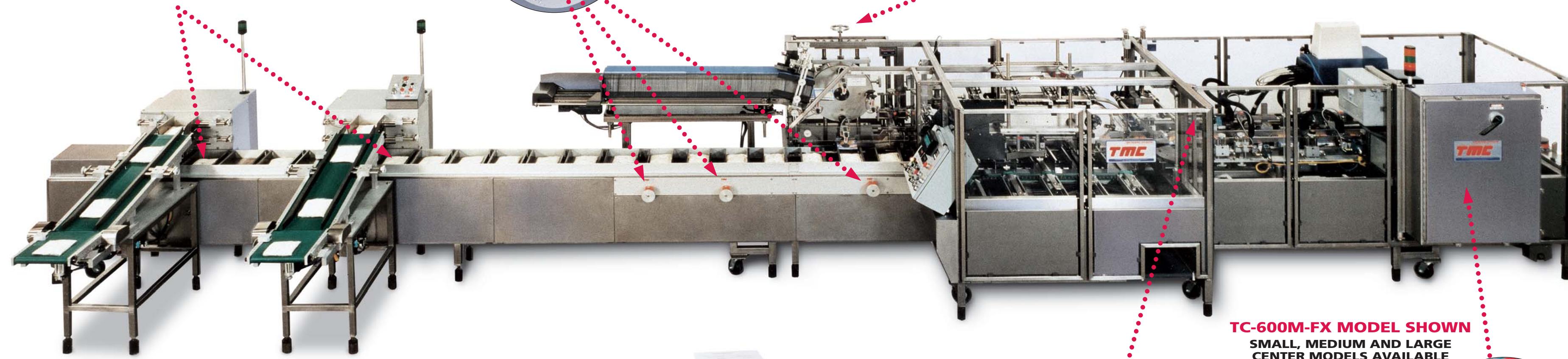
In operation, Flexo-Tray® article buckets, *articulate*. Expanding. Contracting. Simple? Yes. And look at the benefits. At the product transfer points, the buckets open wide, offering a large transfer window for more efficient transfers, gentler product handling and space for a variety of pack patterns. As the loaded buckets progress toward the cartoner, they *contract* shaping, sizing, orienting and conditioning product *online*, as shown in the bottom photos. The result? More efficient product transfer, less product damage, more pack pattern flexibility, more efficient carton loading.

**DIAL TRAY SIZE FOR CHANGEOVER**

Large dials allow simple and positive control of Flexo-Tray's variable width article buckets for quick, cost-effective changeovers. Progressive dimension articulation can even be made during operation to account for fluctuating product parameters. Dials can be controlled continuously or secured for management-only control.



▼ **Precise settings for carton control** are achieved by XYZ rotary, dials and chart reference methods. Settings for each phase, including placement, loading and closing, allow for convenient, independent adjustments. Digital setting controls are optional.



**TC-600M-FX MODEL SHOWN  
SMALL, MEDIUM AND LARGE  
CENTER MODELS AVAILABLE**



**RECEIVES**

*The buckets open to their widest dimension for efficient transfers, gentle product handling and pack pattern flexibility.*

**ORIENTS**

*The buckets then begin to contract, shaping and sizing bags, orienting and aligning pouches, slugs or other products...in single or multiple counts.*

**CONDITIONS**

*The buckets continue to contract. Articulation may be linear, a single motion, or phased through a series of opposing motions, for products that require substantial conditioning.*

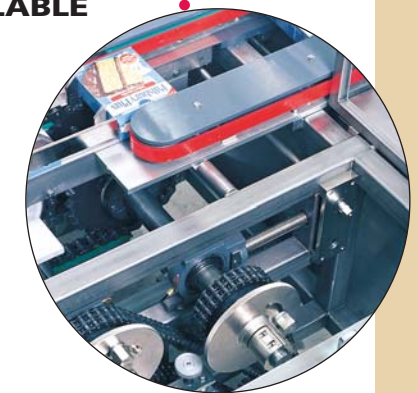
**OPTIMIZES**

*Finally, the buckets adjust to the optimum width for efficient, and gentle product loading. From product transfer to carton loading, the sequence is smooth, continuous and predictable.*



**Convenient, fast access**

for adjustments and service come with push-button controls for raising and lowering hold-down guides and carton conveyor advancement for each principal 600 Series section.



▼ **Accuracy and efficiency** with one-location individual leading and trailing chain-lug, singlebolt adjustment. Single point chain take-up is also featured.

**TMC 600  
SERIES  
HORIZONTAL  
CARTONERS**

These continuous-motion cartoners perform to speeds of 400 CPM depending on model and application. Each includes: powered carton magazine and rotary placement; article trays that cam in to carton score line; PLC controls; self-diagnostic panels; positively precise dial adjustments with scale or digital references; straight or reverse tuck, hot melt or other carton closing; product, carton and loading sensing systems; and many other features unique to Tisma cartoners - including meticulous engineering and uncommonly fine craftsmanship.

**FLEXO-TRAY®**

Handles single or multiple counts in a variety of pack patterns.