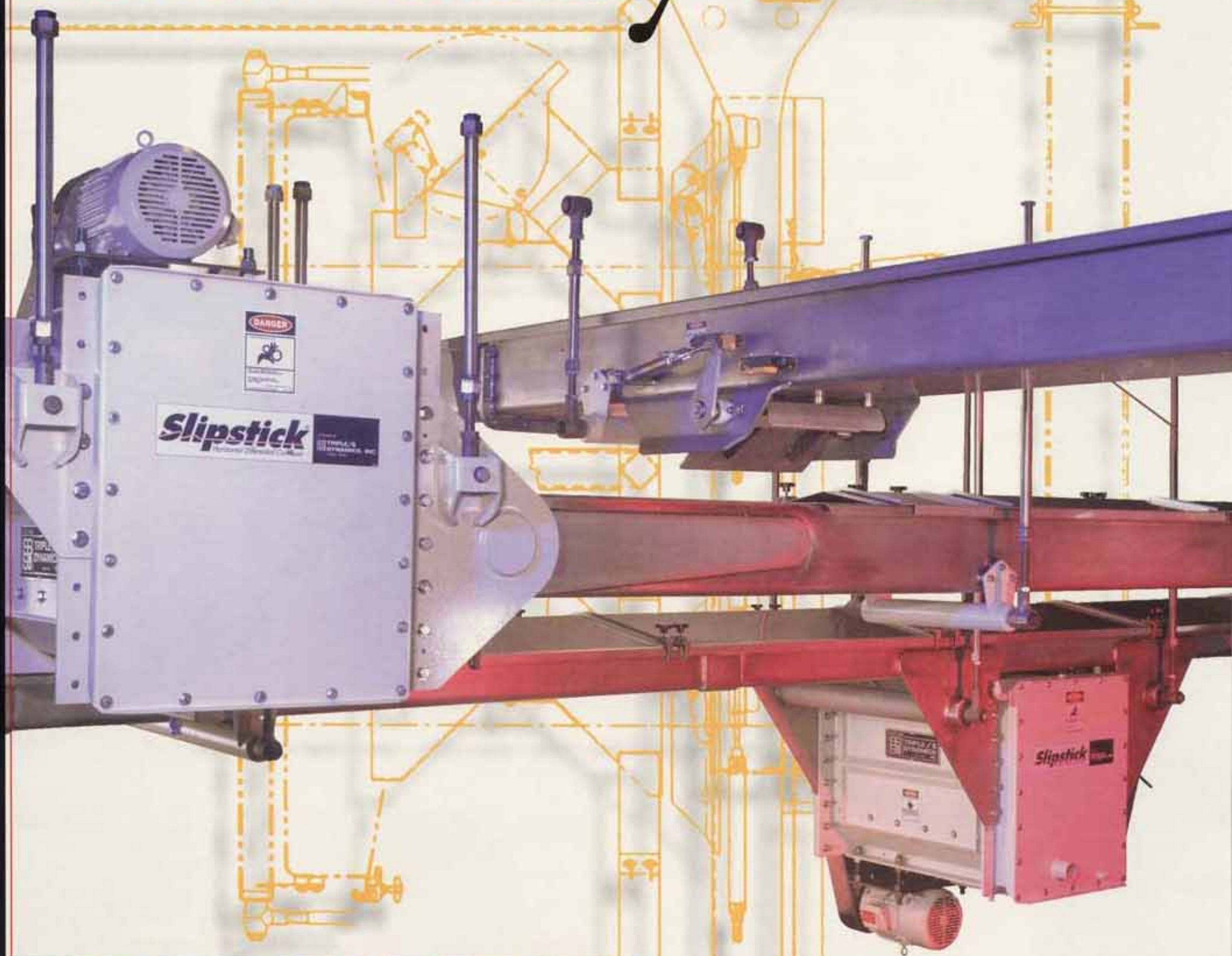


# Slipstick Conveyor



# Installations around the world



**Triple/S Dynamics introduced the Slipstick Conveyor and horizontal motion conveying to the food processing industry in 1982. Since that time, the field of application has grown immensely as the benefits of the horizontal motion conveyor have become well established.**

**The Slipstick Conveyor is an oscillating mechanical conveyor driven with a slow-speed, horizontal differential motion. This motion is a slow-advance and quick-return cycle that glides product along the length of the conveyor. The horizontal conveying motion of the Slipstick offers many important distinctions between this conveyor and conventional "natural frequency" type conveyors.**

**Conventional vibrating conveyors use a vertical component of motion to briskly spank the product bed, which can degrade fragile products and promote adherence of material to the conveying surface. In contrast, the Slipsticks' horizontal motion**

**does not impact the product, so product damage is avoided. A further advantage is that the motion of the product bed in the conveyor discourages build-up of materials on the conveying surface.**

**Other benefits offered by the Slipstick include:**

**Clean design for faster sanitation maintenance**

**Retention of seasonings and coatings applied to product**

**Does not promote product segregation during transfer**

**Minimal conveyor cross section fits neatly into installations with limited space**

**Low maintenance requirements meet the needs of limited downtime**

**Improved sanitation maintenance and better quality product are the two main driving forces behind the success of the Slipstick Conveyor.**

**With thousands of Conveyors installed in North America, Europe and the Far East in a broad range of applications, each yielding some special benefit the Slipstick offers over conventional conveyor types. Today, the development of the Slipstick Conveyor and accessory components has set a new standard of performance and sanitation in the food processing industries.**

The best features of the Slipstick are found in what it doesn't do.

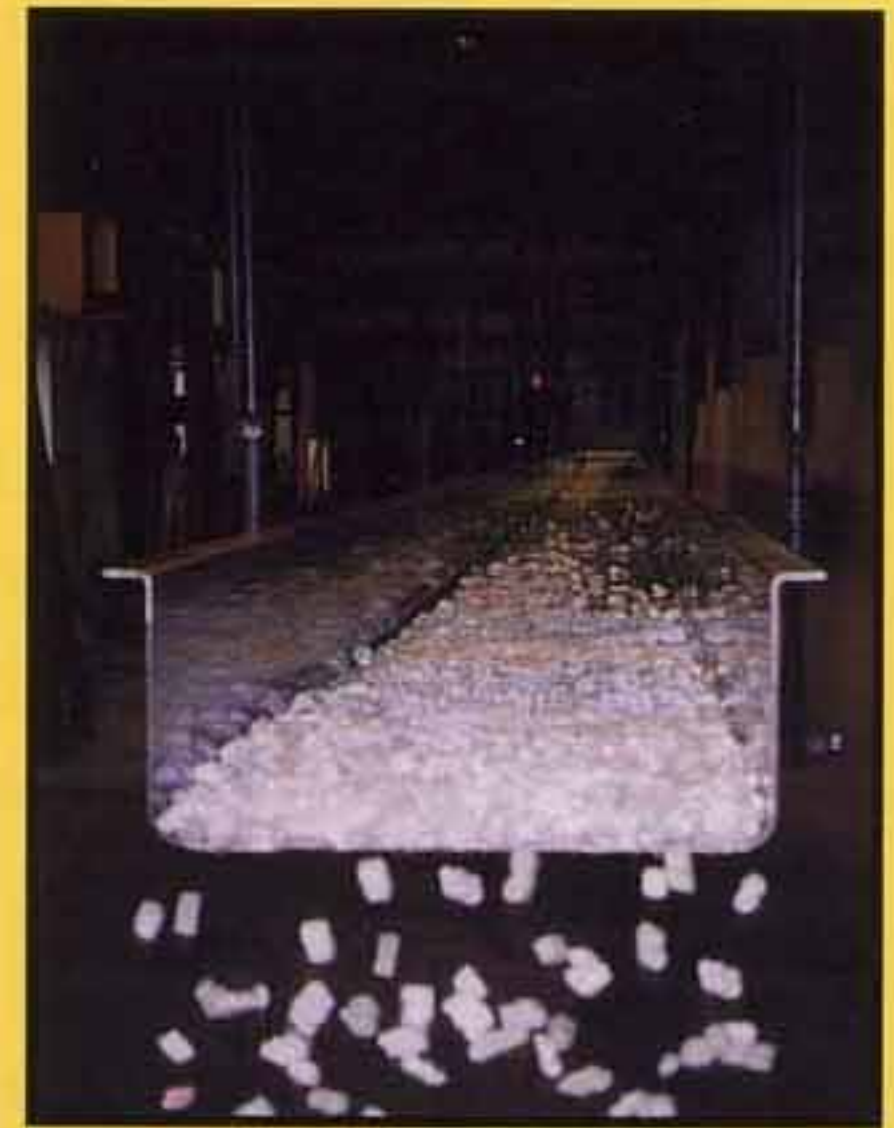


Conventional vibrating conveyors can suffer from build up of sticky or oily fines as shown in the photo. The Slipstick Conveyor is remarkably resistant to these build-ups because the sliding action of the product in the pan continuously cleans the pan surface.

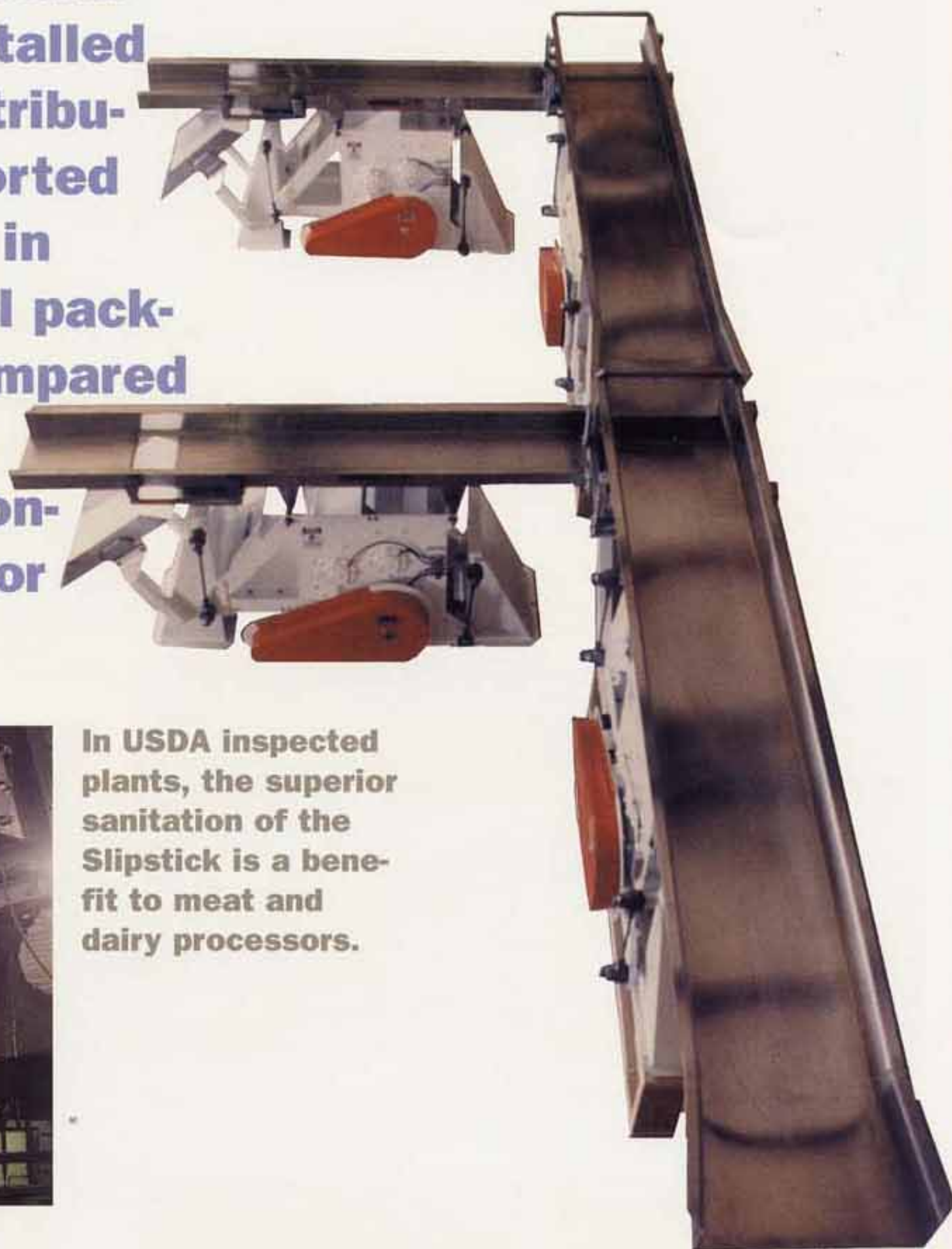


The Slipstick's minimal cross section allows installation in areas too crowded for conventional vibrating conveyors.

**For fragile product conveying, the horizontal motion of the Slipstick Conveyor is unsurpassed in its ability to deliver product without damage.**



**The snack food manufacturer that installed this modular distribution system reported a 50% reduction in breakage of final packaged product compared to similar plants equipped with conventional conveyor systems.**



**In USDA inspected plants, the superior sanitation of the Slipstick is a benefit to meat and dairy processors.**

**In pretzel handling, where salt loss is a product quality concern, the Slipstick Conveyor has been used as an alternative to belt conveyors.**



**This two-conveyor product distribution loop offers the product handling benefits of the horizontal conveying motion with the mechanical simplicity of only two drive units.**

Every Slipstick Conveyor installed has been selected to avoid problems found in conventional vibrating conveyors.

## Triple/S Dynamics has installed Slipstick Conveyors in a broad range of applications for the food processing industries.

Shown here are some of the more common applications where the product handling benefits of the Slipstick, or the unique design arrangement of this conveyor, make the Slipstick a superior choice.

Slipsticks have been installed ranging from six inches to seven feet in width and up to 200 feet in length. Most Slipstick Conveyors are at work today



A Slipstick Modular Distribution System delivers product immediately on packaging demand.

with dry food products, but wet, oily, and some sticky products are also being handled by this conveyor.



The use of product hold backs in the Slipstick system develops the surge or storage capacity of the conveyor pan.



The gentle product handling characteristics of the Slipstick eliminates concerns about conveyor induced product damage in long transfers.

The recirculation loop uses two Slipstick Conveyors in a closed loop to distribute product and to provide short-term storage.





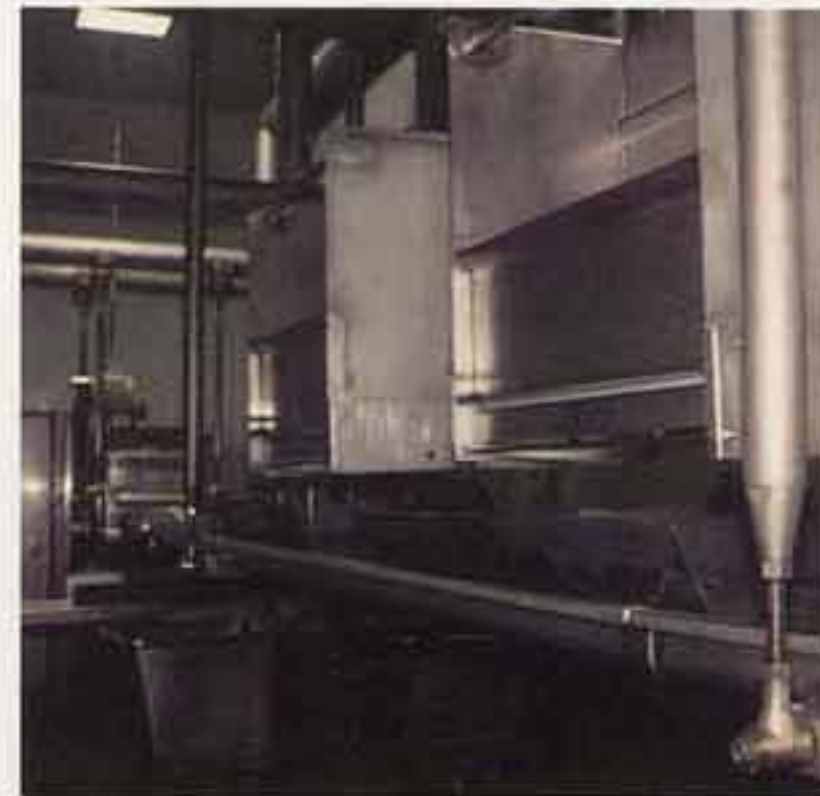
With close-spaced discharge gates, this Slipstick is used for first-in, first-out product loading into a storage conveyor.



Making use of the variable speed feature of the Slipstick, or by on/off cycling, the conveyor is used as a scale feeder.



The completely horizontal conveying motion of the Slipstick opens up some new opportunities in product aligning or product singulating.



The ability of the Slipstick to convey deep product bed loads allows it to be used as a self discharging storage unit.



The Slipstick can be equipped with screens for size control.

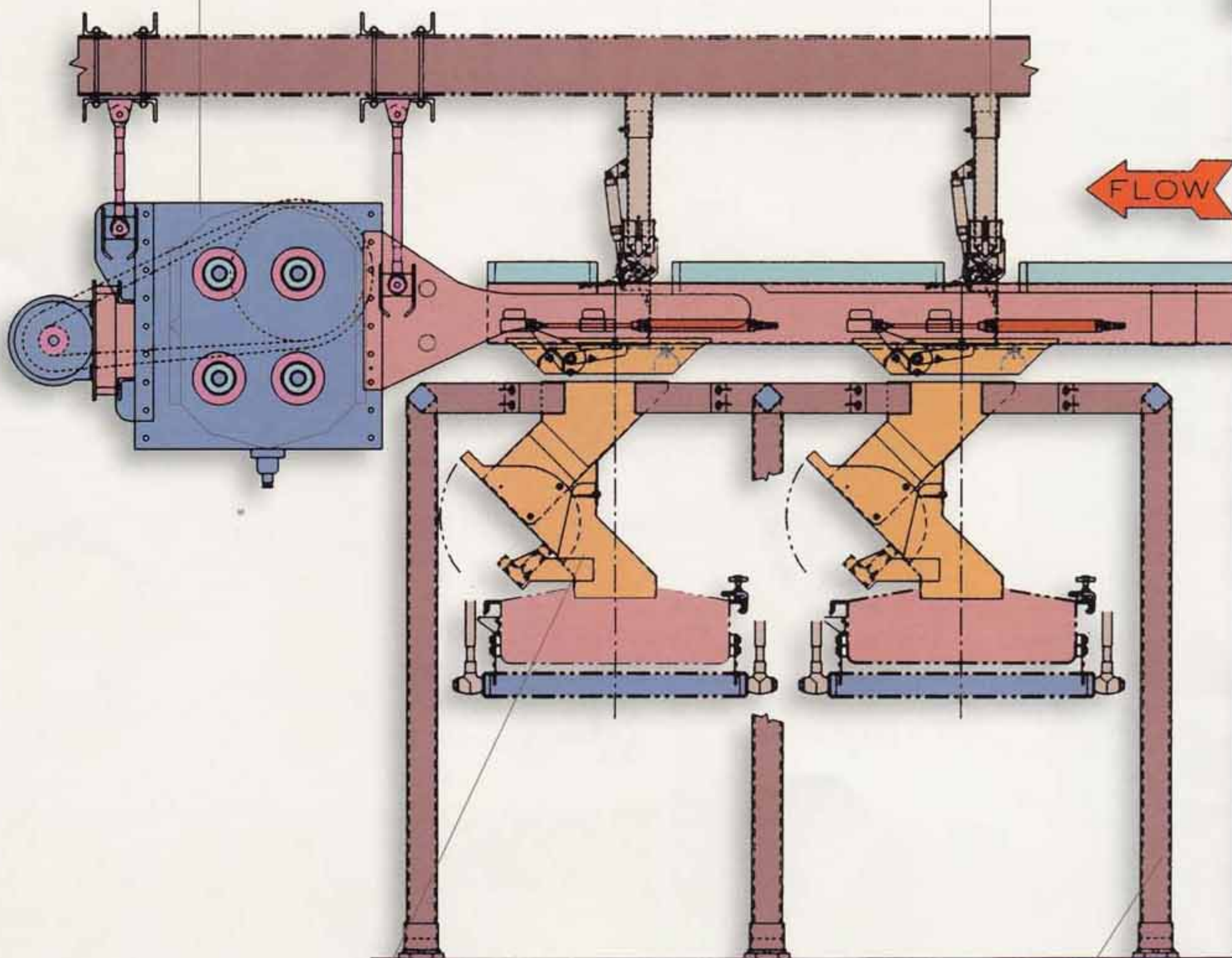


Plastic sections may be integrated into the Slipstick pan to pass through metal detectors or mass flow sensors.

**The Slipstick is basically a very simple machine.**

**The Slipstick Conveyor drive comprises four shafts that are rotated in a relationship timed to produce the differential motion.**

**Optional product hold-backs may be used to protect product from the gate closures or to build surge capacity in the conveyor pan.**

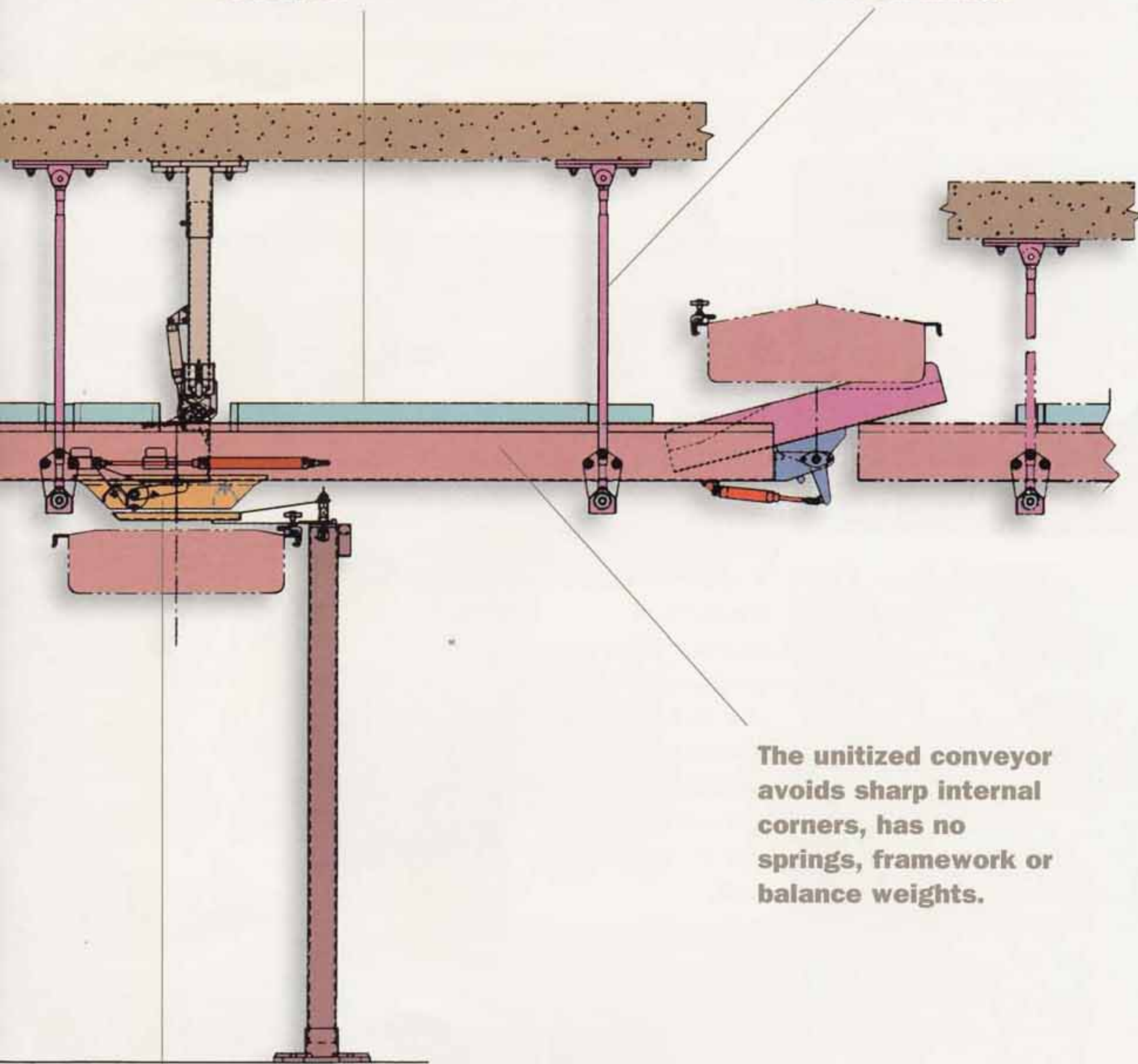


**Discharge chutes may be used to minimize the possibility of product cross contamination.**

**Supporting structures may be designed by Triple/S engineers to integrate the conveyor into the installation, or with surrounding equipment.**

**Integral or stationary pan covers may be used to protect the product from foreign intrusion without impeding sanitation maintenance of the conveyor.**

**Rods may be supplied to support the conveyor from overhead, or pedestals may be provided for floor mounting.**



**The unitized conveyor avoids sharp internal corners, has no springs, framework or balance weights.**

**A variety of discharge gate designs are available to best fit the needs of the product and application.**

The Slipstick Conveyor can be equipped to best meet the needs of almost any application today.



**Discharge chutes may be selected, or custom designed to best fit the installation. These chutes may be specified for cross contamination avoidance, gentle product handling, or abrasion resistance. Discharges may be booted for dust control or for isolation of the product stream from the ambient environment.**



**Product hold-backs may be conveyor mounted, or mounted from a stationary support to protect the product from the gate closings, or to build surge capacity in the conveyor pan.**



**Screens for various processing operations may be used for carefully selected purposes.**





**Each Slipstick Conveyor is powered by a single differential drive unit. The drive may be placed at either end of a conveyor, or below the pan, or in some cases above the pan. The product flow direction of Slipstick Conveyor can reverse by reversing the polarity of the electric current to the motor. The Slipstick drive is energy efficient, and variable speed control can be supplied with a simple frequency inverter.**



**Motor control centers and electrical control systems may be included to tie together all of the control features of the Slipstick Conveyor system.**



**Integral or stationary pan cover designs are available as standard features. Covers may be flanged for connection to other equipment, interlocked for access restriction, and may be clamped and/or hinged for ease of sanitation maintenance. Cover sections are designed to be easily manageable by sanitation crews and require no tools or special equipment for access or removal.**



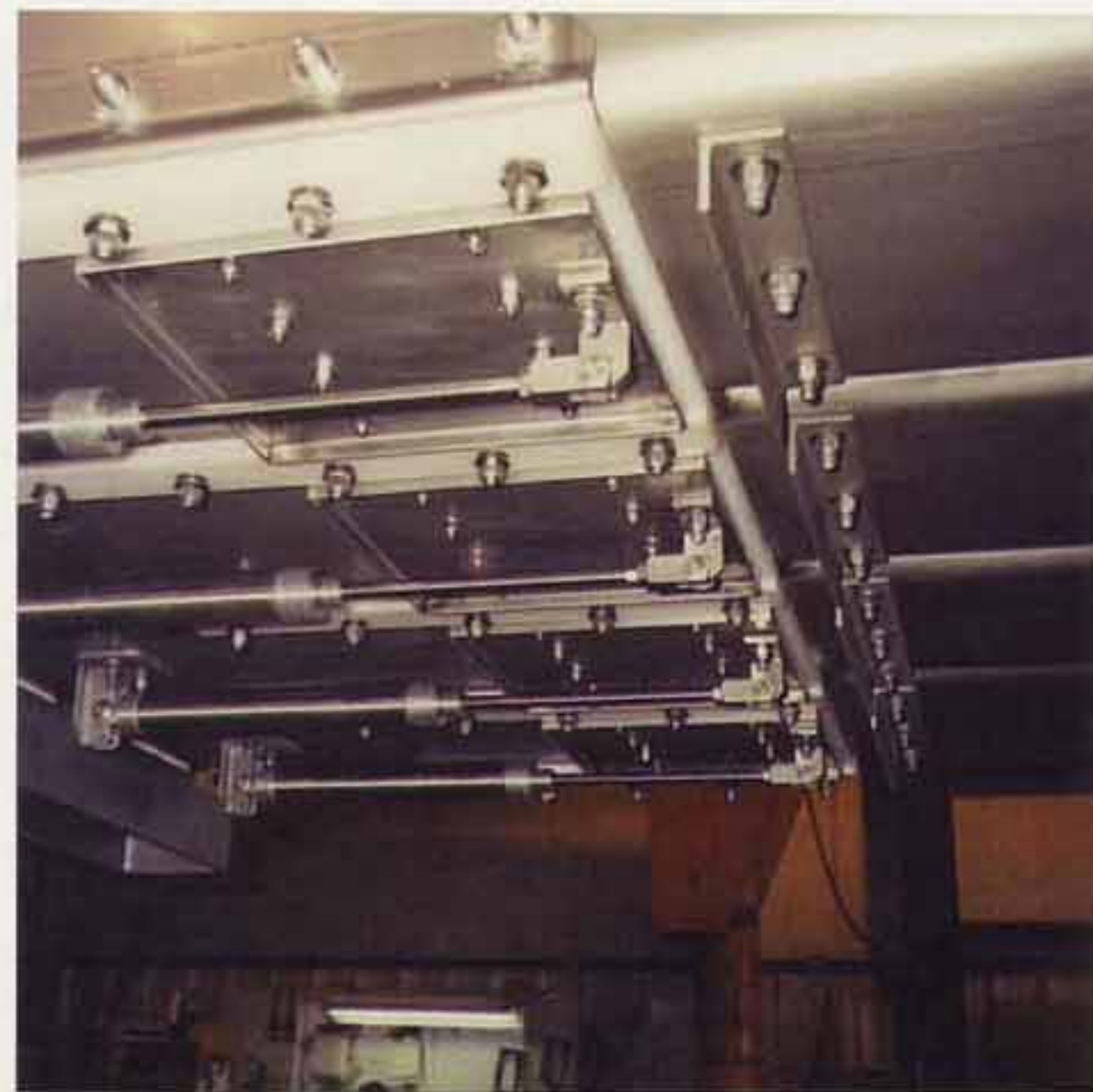
**Structural support for the Slipstick Conveyor system may be designed to integrate the conveyor system with packaging or process equipment. Triple/S Dynamics' engineers use up-to-date analytical tools to offer the best features in structural systems for sanitation, access, and cost effectiveness.**

**A variety of discharge gates, each designed for specific product and performance requirements, may be specified for the Slipstick Conveyor. All Slipstick discharge gates may be equipped with flow control valves for gate speed adjustment and with proximity sensors to register the open or closed status of the gate.**



**The Proportioning Gate is used to control the split of a product flow into multiple streams. Adjustable presets are used to allow the proportions of each split to be adjusted during the operation of the conveyor.**

**The Plug Gate is designed for maximum sanitation and protection of the product stream from contamination. Originally designed to meet stringent 3A Dairy Standards for design and construction, this gate presents only welded stainless steel and no fasteners in the product zone.**



**Designed for rugged use, the cost-efficient Standard Slide Gate includes a UHMW gate plate that is retained by stainless steel guide rails.**

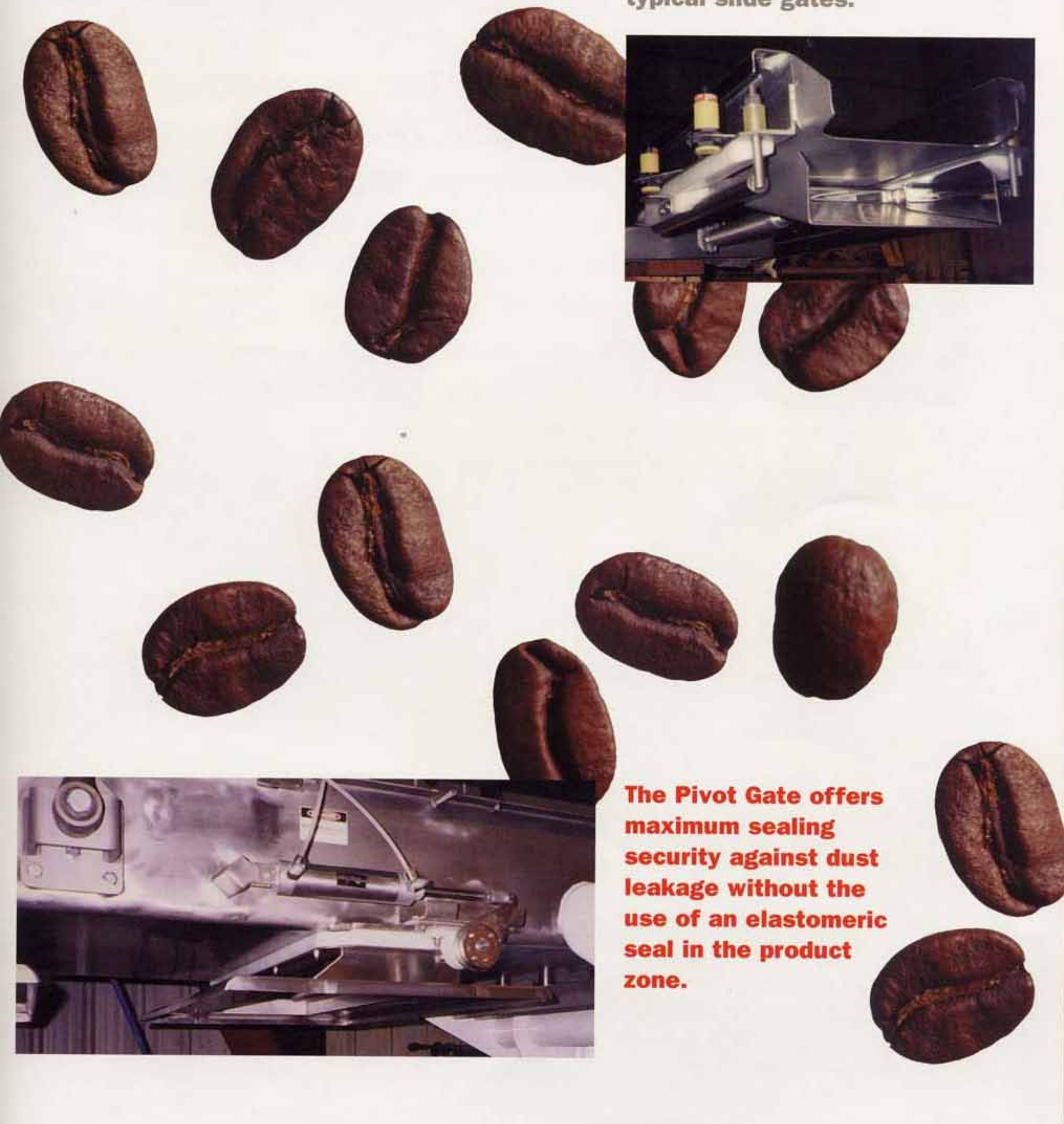


**The Rail Gate is used for handling products that tend to build residue on contacting surfaces, or for environments where sticky or abrasive dust is present.**

**The Pinch-Free Gate is used for sticky products or for products that are vulnerable to damage in typical slide gates.**



**The Pivot Gate offers maximum sealing security against dust leakage without the use of an elastomeric seal in the product zone.**



Triple/S has developed other products of interest to processors.

**Since 1888, Triple/S Dynamics, Inc. has been in the business of providing specialized processing and material handling equipment to the processing industries.**

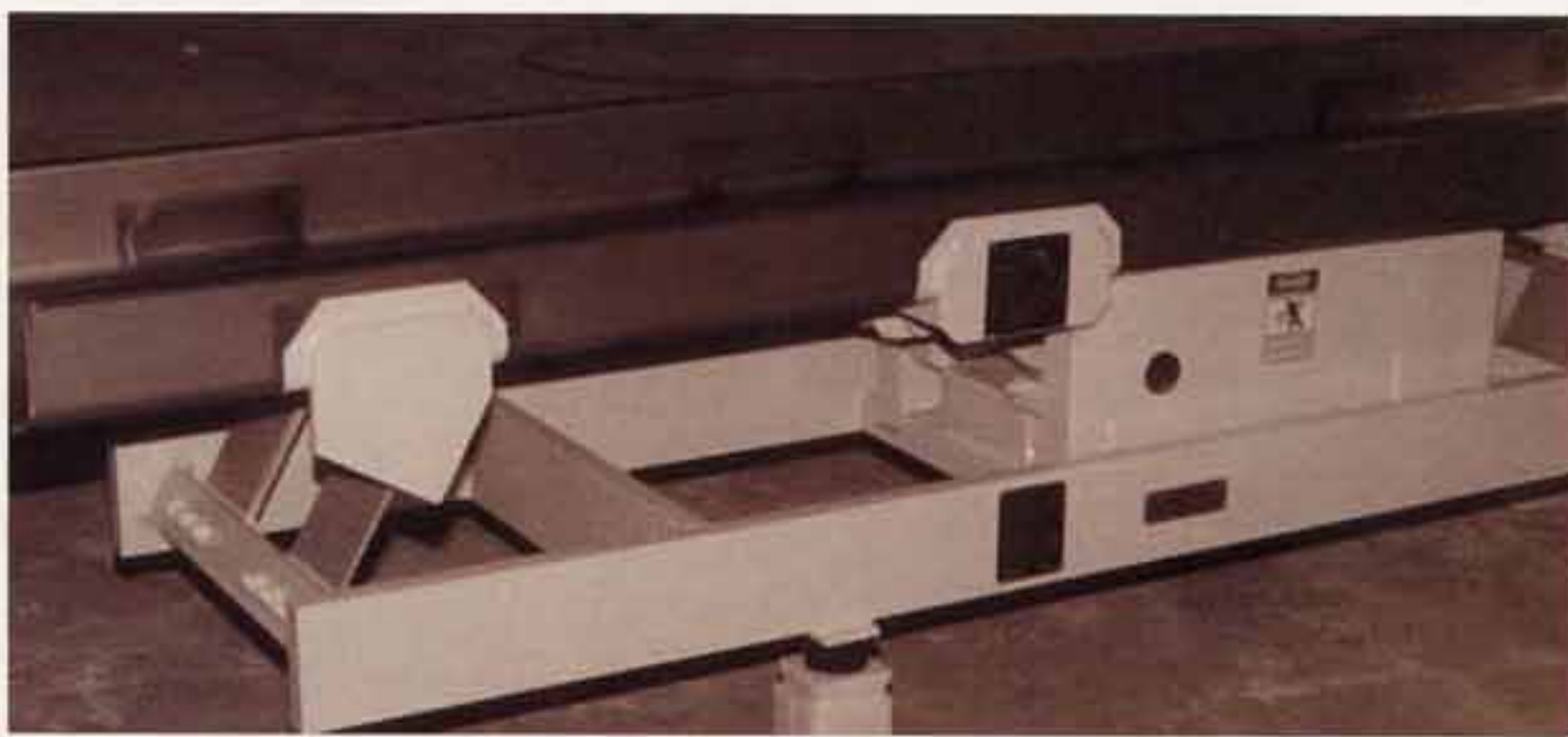
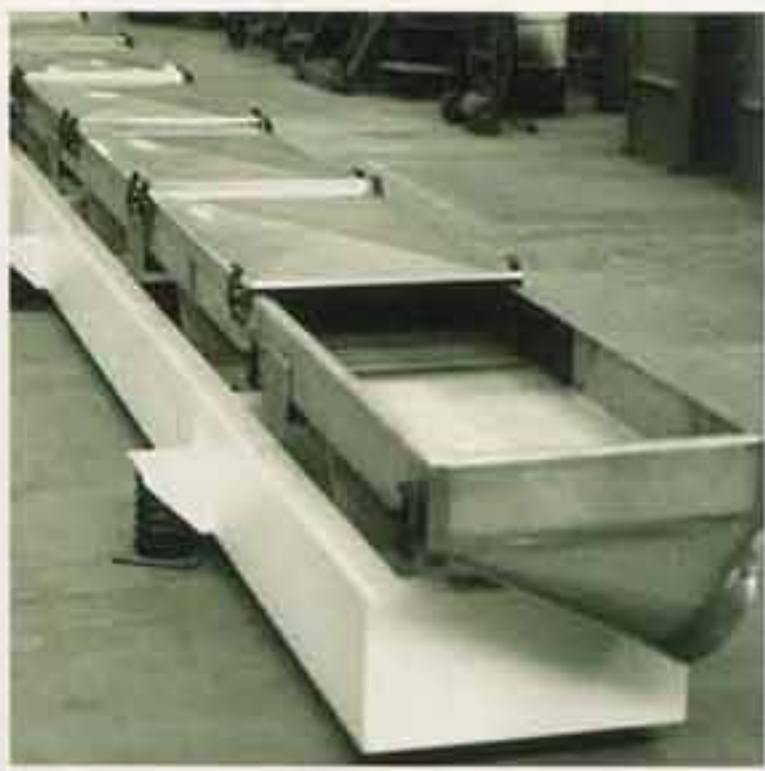
**The company was formed from the combination of Sutton, Steele & Steele, inventors of vibrating air separation equipment, and the Overstrom company, who developed the earliest vibrating screens.**

**Today, this experience is evident in a broad range of vibrating equipment for separating materials of differing density, and in the company's lines of vibrating conveyors and screening equipment.**

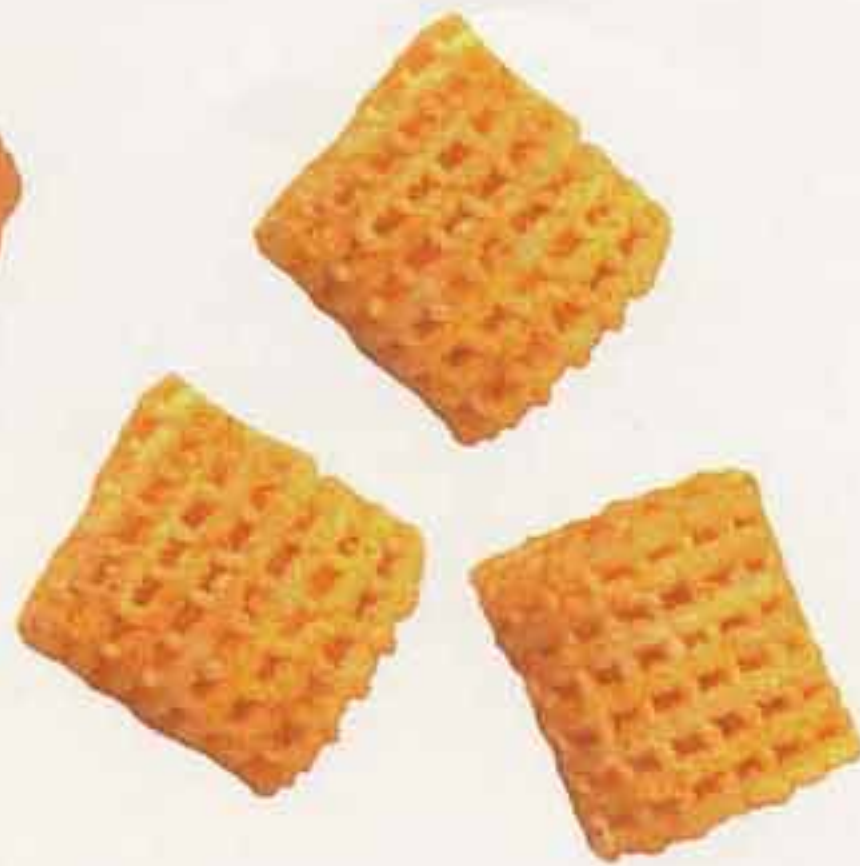


**The Gravity Separator or Stoner is used today to remove off-spec materials from quality products by differences in particle density.**

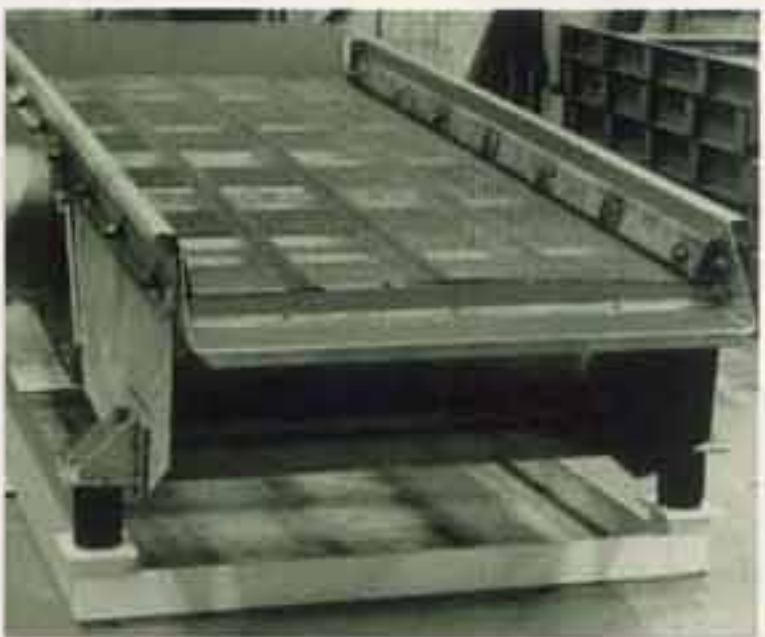
**Cereal products, tree nuts, legumes, grains, and a variety of processed products benefit from the product quality improvements that can be offered by this equipment.**



For screening, scalping, de-watering, high speed delivery, and other applications that call for a pitching action conveying motion, Triple/S Dynamics offers specialized natural frequency conveyors. Designs include machines that are either eccentrically or inertially driven, fully balanced, and equipped with the same range of optional features that are available with the Slipstick Conveyor.



**Triple/S Dynamics screening equipment ranges from small de-watering screens to the largest Texas Shaker, capable of screening over 1000 tons of grain per hour. With several lines of machine design available, Triple/S can best fit most screening applications.**





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