



## Food-Processing Motion Optimized.

Contributing expertise and technology to the advancement of high-productivity food-processing applications.



# Application. Design. Performance.

Thomson optimizes every step in the creation of dependable and durable food-processing equipment.

Your engineering isn't complete until you understand how Thomson can contribute to **optimized motion in food-processing equipment**. Thomson has decades of experience in supplying technologically superior components that allow application flexibility while pushing production efficiency. We also streamline the sourcing process for components that can be trusted for longevity, washability, corrosion-resistance and performance.

Today we optimize motion for the food-processing industry through:

**Superior products.** We have the broadest selection and readily provide standard, modified standard and full custom solutions. Thomson supplies and optimizes:

- Rodded and rodless actuators
- Linear bearings
- Ball and lead screws
- Linear guides (round and square rail)
- Micron® planetary gearheads
- Linear slides and systems
- Deltran clutches, spring-set brakes and resolvers

**Superior technology.** Our products perform as promised and over-deliver on quality and longevity. Thomson components can:

- Withstand caustic cleaning and demanding use without corrosion through use of 300-grade (303, 304, 316) stainless, UHMW coatings, Armalloy and many more options
- Provide 120 psi spray-rated washdown compliance
- Offer food-grade Lube-for-Life lubrication

**Unbiased design solutions.** Our unmatched breadth of line encourages designs that don't compromise. And our commitment to fully agnostic solutions ensures this. We have tremendous ability to test your application load and movement profiles to develop optimal solutions. And we bring 60 years of experience in optimal, standard, modified-standard and full custom designs. We also specialize in:

- Zero-setup products for speed-to-market and cost effectiveness
- Electric actuator conversion from hydraulic or pneumatic
- Online sizing and selection tools at [ThomsonLinear.com](http://ThomsonLinear.com)

**Complete your engineering process by talking with Thomson about optimized motion for the food-processing industry.**

## Integrate Our Expertise Into Your Design Process.

When experienced Thomson engineers contribute early in your design process, you optimize machine performance, life and cost. Leverage our capacity for analysis, modifications and white sheet solutions. Take advantage of smart standardization that gives you more freedom and improved speed to market. And then rest easy knowing that the results will be predictably excellent. Here are some of the keys:

**WE DEVELOP** standard platforms that make any design easily customizable.

**WE PRODUCE** zero set-up products to get our clients to market faster and more cost-effectively.

**WE TEST** extensively on your equipment to enable evaluation of our products in your application.

Couple these process advancements with our highly proven, highly engineered components and pre-assembled systems, and you've optimized your food-processing machine project.

## We Participate in a Wide Range of Food-Processing Applications.

Through world-class components and systems, decades of motion-control expertise and a global footprint that includes over 200 distributors, we contribute to a very wide array of food-processing applications:

Accumulators  
Bag fillers  
Blenders  
Capsule fillers  
Choppers  
Conveyors  
Cookers  
Cup fillers

Cutters  
Deboners  
Dumpers  
Elevators  
Extruders  
Fillers  
Form, fill and seal  
Heat exchanges

Injectors  
Loaders  
Material handling/palletizers  
Meat processing  
Mixers  
Ovens  
Patty formers  
Pick and place

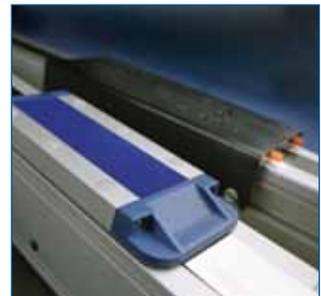
Pouch machines  
Presses/cutters  
Scales  
Separators  
Slicers



*Leverage our capacity for analysis, modifications and white paper solutions.*



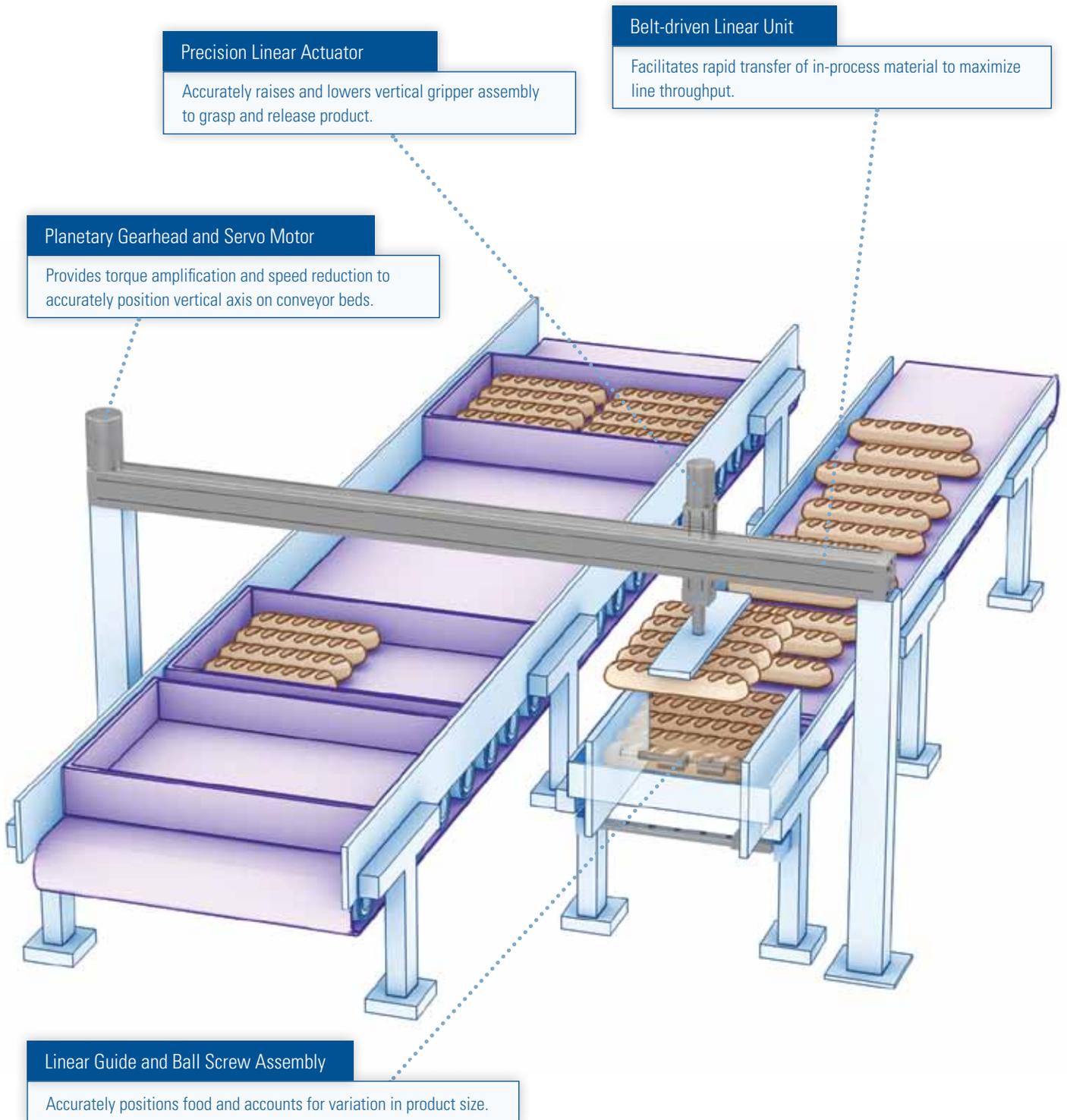
*Trust our testing of your equipment to optimize your product application decisions.*



*Reach market faster with our zero-set-up products.*

# BREAD ROBOT

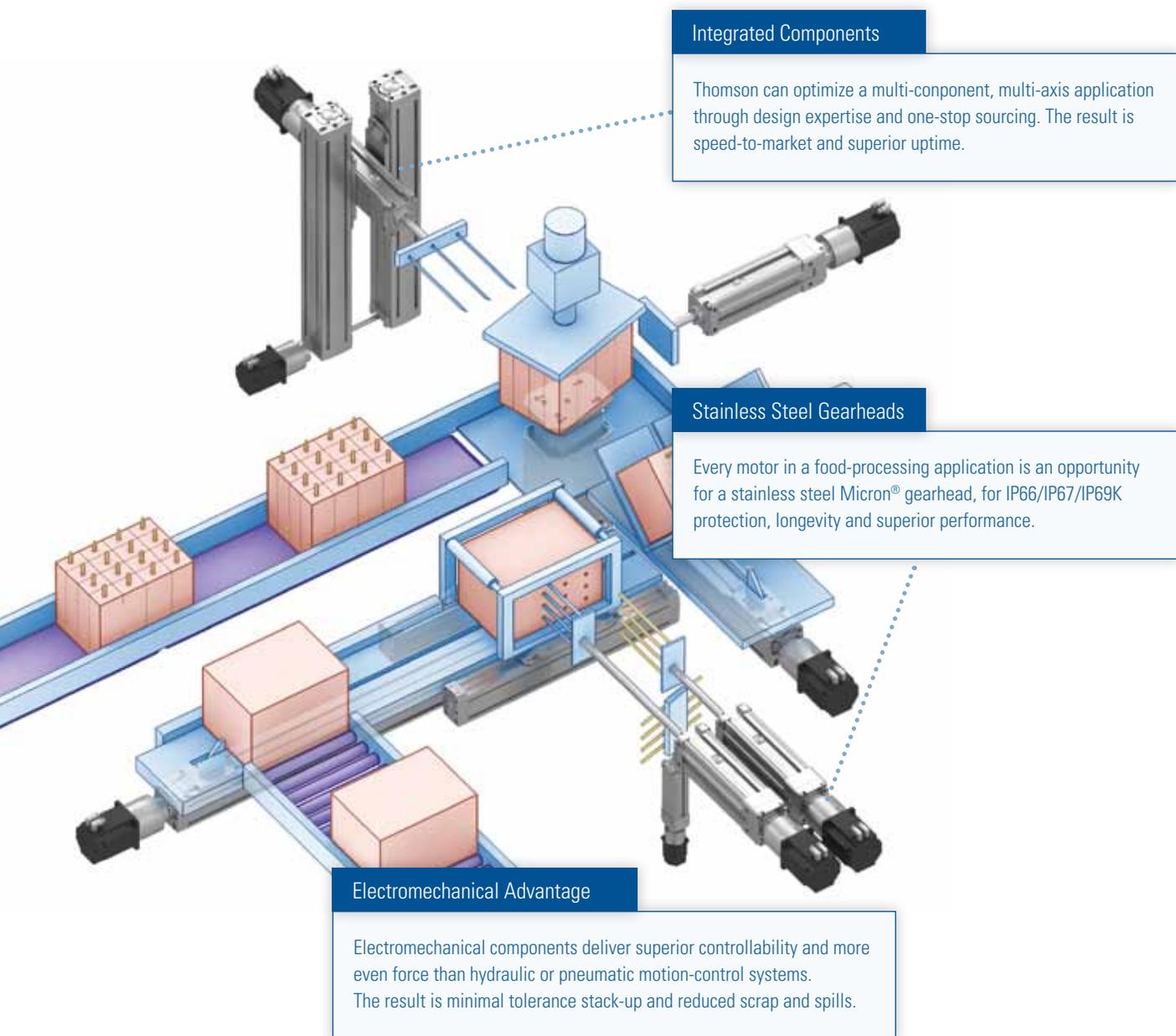
Two-axis packaging robots do considerable work in assembling and packing food items like baked goods, boxed cereal, boxed dairy products and mincemeat in trays. The system involves picking, placing, arranging and conveying individual items and the final packages. A wide range of Thomson components contribute to this vital food-processing function, including ball screws, guides, full linear motion systems and planetary gears and servo motors – all meeting strict washdown demands.



# SKEWER/ASSEMBLY

Thomson's components and solutions shine in high-throughput multi-axis applications such as assembly lines with skewers. Skewer units employ gearheads and clutches, brakes and resolvers and rodless actuators in optimal combinations. Skewer units can employ dual guides for raising and lowering, or these can be replaced with a single profile rail or two profile rails. These also employ clutches and gearboxes to complement the motor unit.

These multi-axis food-processing applications are tailor-made for Thomson's integrated solutions. Consult with us early in the design process to leverage our testing capacity and customized solutions, our sourcing advantages and our collaboration with other Danaher divisions. The result will be a better machine delivered more quickly.



## Integrated Components

Thomson can optimize a multi-component, multi-axis application through design expertise and one-stop sourcing. The result is speed-to-market and superior uptime.

## Stainless Steel Gearheads

Every motor in a food-processing application is an opportunity for a stainless steel Micron® gearhead, for IP66/IP67/IP69K protection, longevity and superior performance.

## Electromechanical Advantage

Electromechanical components deliver superior controllability and more even force than hydraulic or pneumatic motion-control systems. The result is minimal tolerance stack-up and reduced scrap and spills.

# FOOD VENDING MACHINE

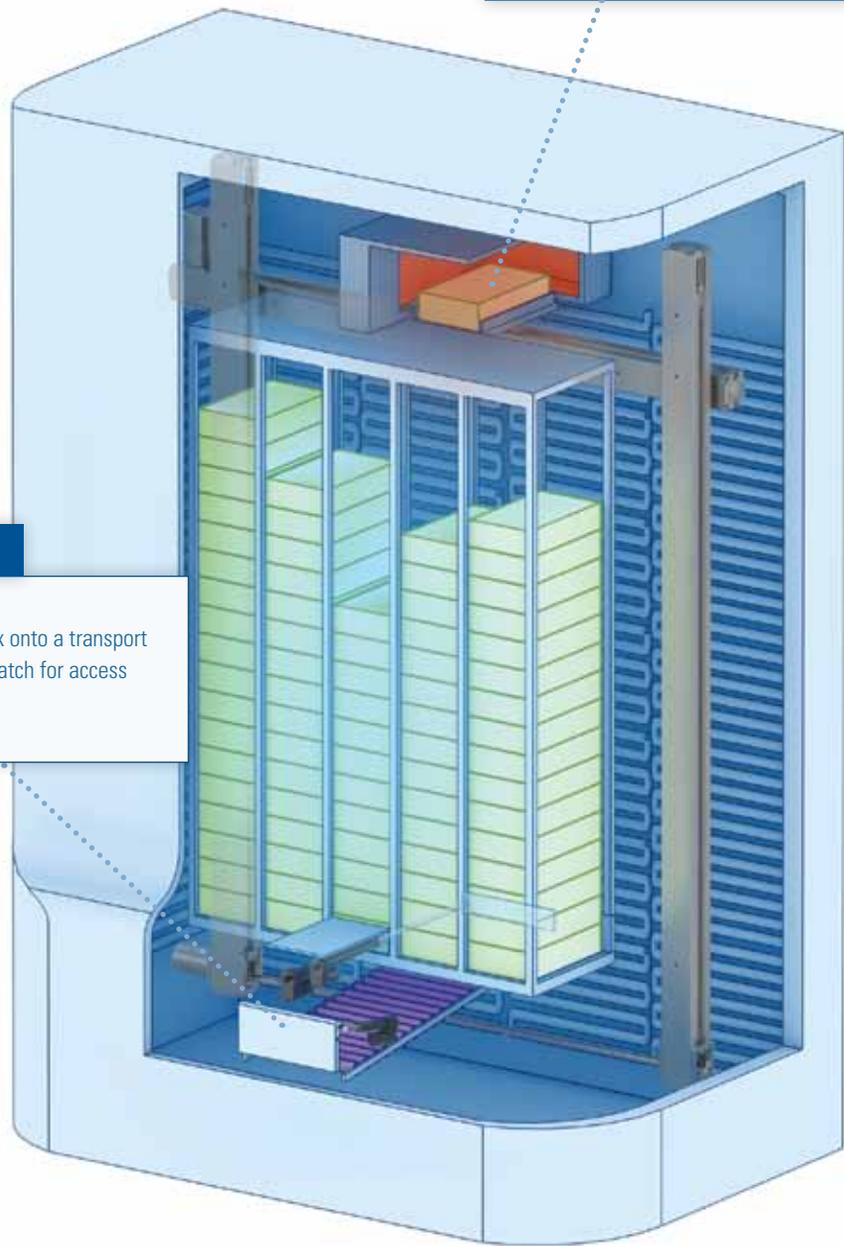
Actuators of multiple sizes, ball screws, gearheads and full linear motion systems combine to control the multiple stages in this application, where frozen dinner boxes are placed in a microwave and heated before being delivered to a hatch for the customer. Here, as with a food packaging robot, ball screws can replace actuators in many cases, to provide more customizability at reasonable cost.

## Linear Actuator and Linear-Motion System

The dinner box is pushed out of the freezer by a linear actuator and positioned sideways via a linear-motion system, which is driven by a motor and a gearhead.

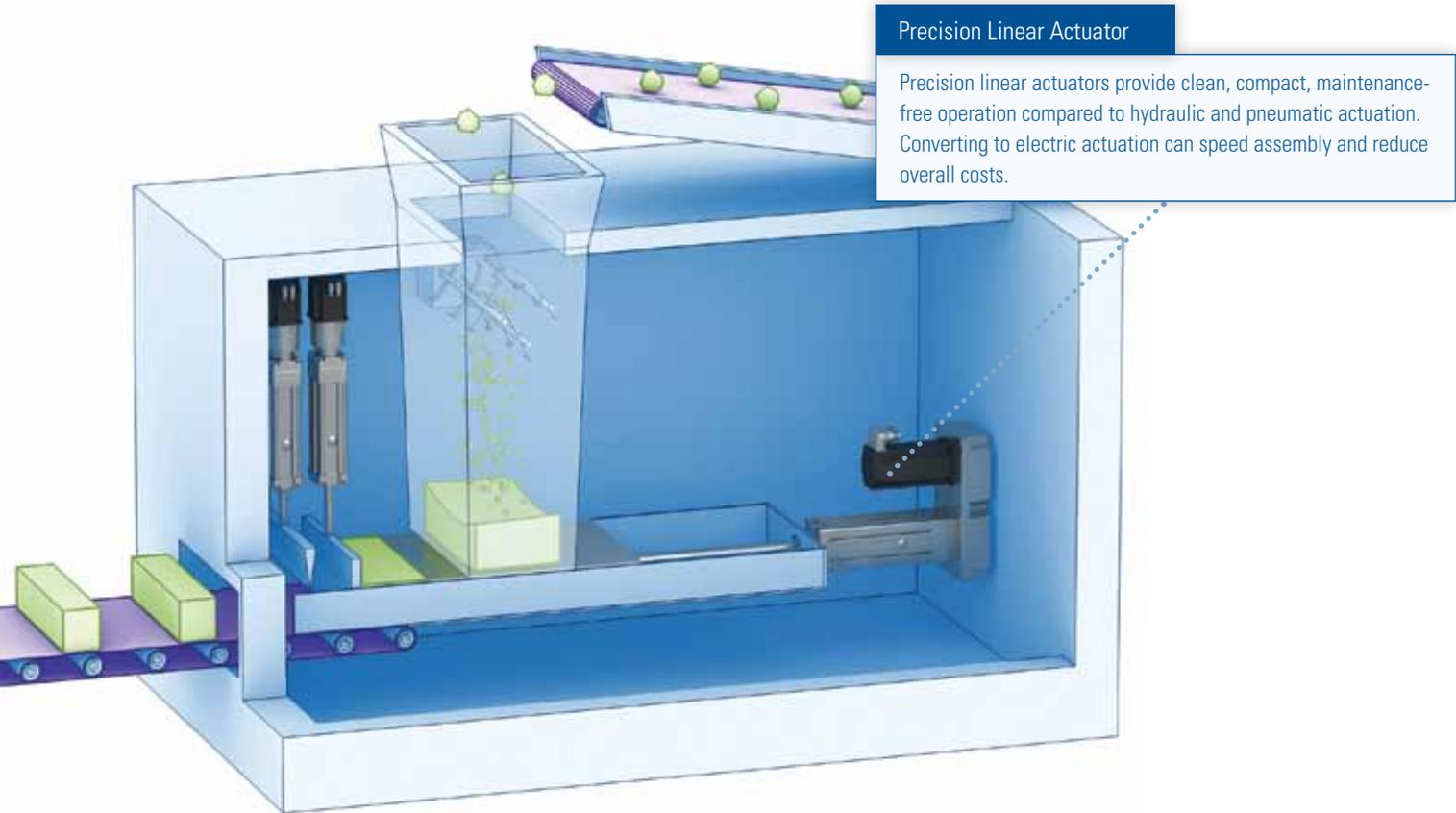
## Actuators

Actuators push the dinner box onto a transport conveyor and also open the hatch for access by customer.



# FOOD PRESS

Food press applications can employ numerous Thomson components and fully engineered solutions. The press mechanism can make use of a high-load rodded actuator with a friction break and feedback element. The stop block can be raised and lowered with the help of a linear actuator, and the slicer can employ a planetary gearbox and round-rail linear guides, all resistant to corrosion and caustic cleaning elements. Underneath, a wrap-spring clutch helps index the motor driving the conveyor belt.



# DEBONER

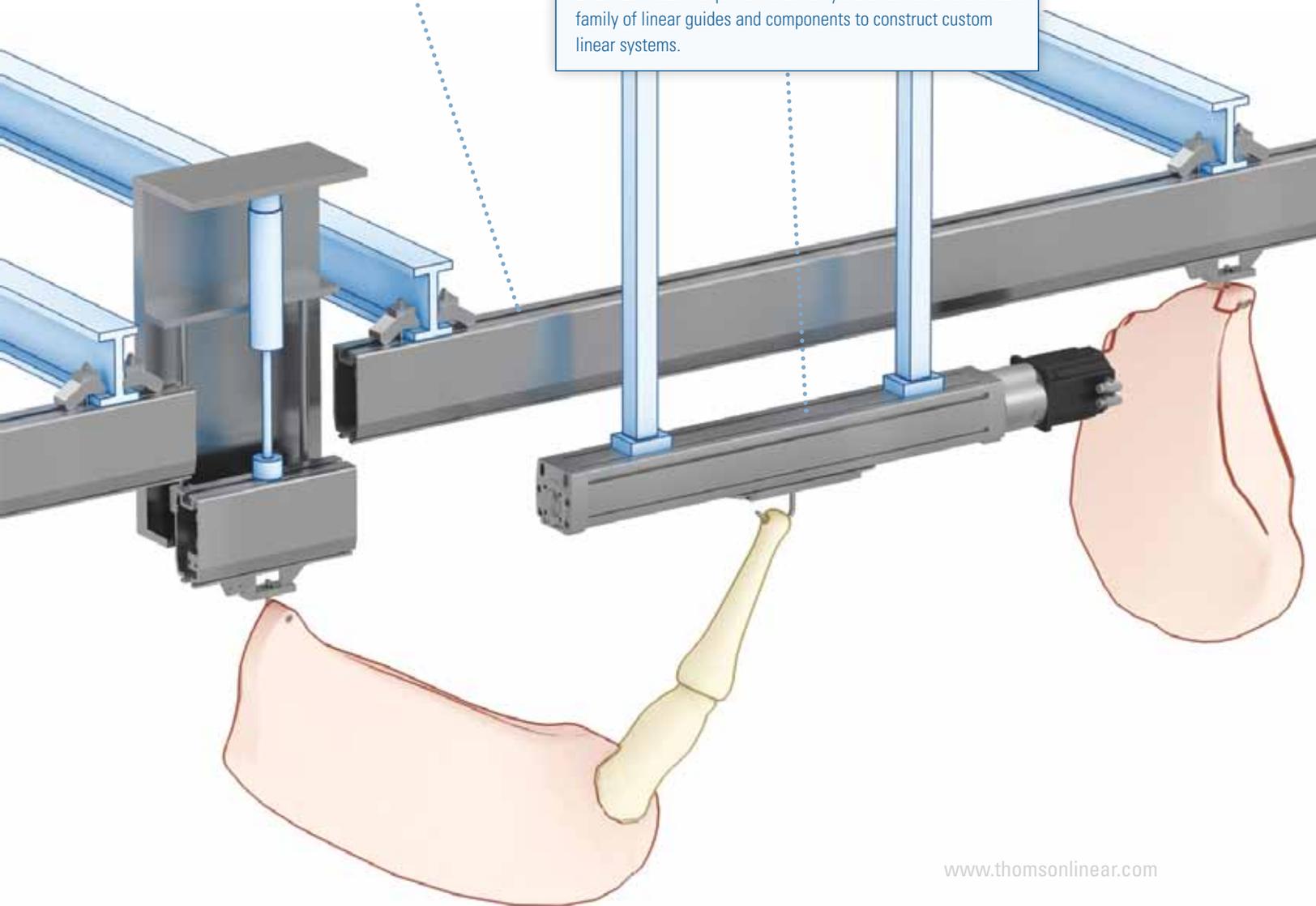
These heavy-duty positioning machines promote safety by handling the hard work of positioning carcasses for deboning. In this application, round rail linear guides are employed in an elevator that brings product to an overhead monorail crane system. Horizontal motion is driven by a zero-setup linear motion assembly with a stainless steel Micron gearhead. These components must be extremely durable and must withstand high-pressure, caustic washdowns, to ensure food safety.

## Crane System

The monorail crane system is modular, lightweight, and simple and fast to install.

## Linear System

The Thomson linear system and food-grade gearhead are well suited to harsh washdown environments. Thomson also offers as an alternative to pre-assembled systems the widest available family of linear guides and components to construct custom linear systems.



# Employ Our Superior Thomson Technology.

Leading-edge food-processing technology is built on leading-edge motion technology, starting with minute engineering details we've mastered over decades of intense work. From patented anti-backlash technology for lead nuts to proprietary processing for roll-forming, and the Lube-for-Life™ technology we invented, our components are built to over-deliver.

## Leverage Our Ability To Modify or Customize.

Our application expertise is very deep and our product portfolio is very broad. The result: we can modify our standard products to any degree in a very short time frame. Similarly, we have the design and engineering expertise and technical knowledge to deliver white sheet solutions for virtually any need – quickly. From standard products to modified standard or custom products, we can deliver what you conceive.



### ROUNDRAIL LINEAR GUIDES & COMPONENTS

RoundRail linear bearings and guides are pre-assembled with ready-to-install stages that provide low friction and smooth, accurate motion for a wide range of moment or normal load configurations. Slide tables are available as customizable RoundRail Linear Guides or as multi-axis, turnkey systems complete with motors, drives, controls and electromechanical accessories.

### PROFILE RAIL

With sizes ranging from our ultra-compact 5 mm MicroGuide™ to the robust 55 mm 500 Series roller, as well as compliance ranging from our T-Series transport profile rail to the extremely rigid, machine tool-grade roller profile rail, Thomson is the one-stop source for all your profile rail needs.

### LEAD AND BALL SCREWS

Thomson lead screws offer smooth, precise, cost-effective positioning for your linear motion requirements. We offer the widest range of ball screw products in the industry – including rolled and ground thread screws in both imperial and metric sizes. Both include our patented zero-backlash nut technology for excellent repeatability with high stiffness and extremely low drag torque.

### CLUTCHES AND BRAKES

Our wrap-spring and friction clutch and brake products work in a wide range of applications specific to the food processing industry. These products set a solid foundation for the broad range of standard and custom products currently available to our customers.



### GEARHEADS

Thomson Micron® planetary gearheads are used on high-precision motion control applications that require a high torque-to-volume ratio, high torsional stiffness and low backlash. Thomson offers these precision planetary gearheads for all duty cycles, and all with RediMount compliant mounting systems. Web-based sizing, selection, pricing and 3D models of Micron gearheads are available online.



### PRECISION LINEAR ACTUATORS

The compact design and higher load capacities of our precision linear actuators make them ideal for flexible integration in tight areas. These programmable precision linear actuators are available in a wide range of voltage, thrust, stroke and mounting configurations. They are designed for high-speed, high-load, continuous operation.



### LINEAR ACTUATORS

Our linear actuators are designed for rugged, reliable linear motion applications. Numerous choices in stroke, load, motor type, feedback, limits and control options make these linear actuators very versatile. Talk to us about the many advantages of using electric linear actuators in place of hydraulics or pneumatics.



### LINEAR MOTION SYSTEMS

Our linear motion systems can be used virtually anywhere. They can support and move a range of loads and provide high precision and tight tolerances. They are available pre-engineered, pre-assembled or ready-to-install. The load can be supported with ball guides, slide guides or wheel guides. Actuation can be through ball screw, lead screw or belt drive.

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 **THOMSON™**

**Linear Motion. Optimized.**