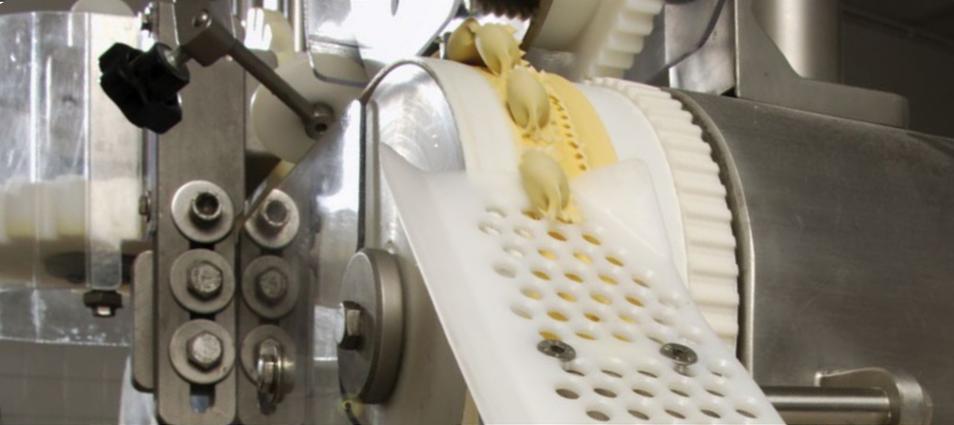


# FOOD & BEVERAGE SOLUTIONS



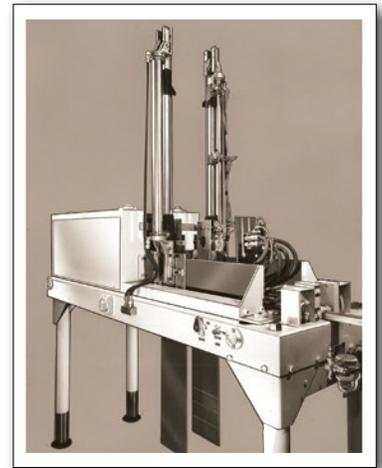


# Automating the food & beverage industry since 1954

## *Industry evolution sparked by revolutionary actuators.*

Tolomatic's first products, the Float-A-Shaft® and the Cable Cylinder greatly improved the efficiency of an early bagger/sealer machine used in the flour milling industry. The unique right-angle gearbox design permitted quick product changeover. To conserve space Tolomatic's founder Burton Toles designed the Cable Cylinder – the world's first rodless cylinder. Both the Float-A-Shaft and Cable Cylinder are still used today by the thousands!

Over 60 years later – Tolomatic's legacy of innovation continues to grow with unique and robust automation components to solve customers' motion challenges.



## *Tolomatic hygienic electric actuators provide:*

- Sanitary design that prevents contamination
- Infinite positioning; high accuracy and repeatability
- Simplifies machine design by eliminating the need for protective guards/enclosures
- Stainless steel design resists corrosion
- IP69K wash-down protection
- “Clean-in-place” flexibility
- Energy efficient operation



# THE PERFECT HYGIENIC ELECTRIC ACTUATOR

## ENDURANCE TECHNOLOGY<sup>SM</sup>

Endurance Technology features are designed for maximum durability to provide extended service life.

*Stainless steel and IP69K protects against caustic wash-down, resists corrosion, prevents contamination and reduces impurity collection points*



•USDA approved hygienic design

### WELDED SEAMS

- Leaving no gaps which eases cleanup and helps to prevent bacterial growth

### STAINLESS STEEL FASTENERS

- Standard metric threads
- Hex fasteners for sturdy construction without potential particle collection areas

### THREADED ROD END

- Compatible with many commercially available metric rod end accessories
- Standard metric threads
- 06, 10, 15, 20 male threads; 25, 30 female threads

### DURABLE SEALS

- For IP69K ingress protection and resistance to caustic wash-down

### ALL 300 SERIES STAINLESS STEEL CONSTRUCTION

- 300 series stainless steel for corrosion resistance
- Simplifies and lowers cost of machine design by eliminating the need for protective guards around standard actuators

### IP69K RATED

- To withstand high-pressure wash-down
- Clean-in-place compatible

### SMOOTH EXTERIOR

- This primary design decision eases cleanup and helps to prevent bacterial growth

### MOTOR PROTECTION

- Motor enclosure made of stainless steel designed to protect motor with IP69K rating (static)

### FLEXIBLE CONNECTION

- Choice of cord grips (PVDF) or industry standard conduit threads



# Tolomatic for all YOUR food &

## BOTTLE FILLING



Fill four bottles simultaneously from the bottom up at various fill rates.

### **Customer Challenge:**

A manufacturer of bottle filling equipment needed bottles to be filled at controlled rates and was currently employing a pneumatic actuator solution. The customer wanted to eliminate the hour long change-over time the pneumatic actuators required to accommodate the various bottle heights introduced on the line. The actuators were also subjected to a wash down environment.

### **Tolomatic Solution:**

An ERD15 stainless steel rod-style actuator with the IP69K option was chosen for this application to withstand the frequent wash down requirements. Tolomatic provided a custom stroke longer than the standard cataloged offering with fast delivery. The customer was also provided a special motor mount through Tolomatic's Your Motor Here program to retrofit their motor of choice at no additional charge.



ERD15 WITH IP69K OPTION

## PORK PROCESSING PLANT



Automatically adjust the height of the trimming station for each animal.

### **Customer Challenge:**

A large food company had a trimming station that needed quick, precise control of the positioning of the knife blade for each animal. The current solution utilized a pneumatic cylinder which was difficult to position accurately as the application requires infinite positioning. Additionally, the pneumatic cylinder needed frequent service or replacement due to the heavy duty use.

### **Tolomatic Solution:**

An ERD25 all stainless steel electric cylinder with IP69K rating was chosen for this application to withstand the frequent daily caustic wash down requirements. The actuator is round bodied with smooth finish and edges for easy cleaning and to prevent contamination risk. Additionally, the customer supplied a white paint motor. Tolomatic provided the correct motor mounting interface and hardware from its "Your Motor Here" program.

ERD25 WITH IP69K RATING AND WHITE PAINT MOTOR

## CHEESE CUTTING



Cutting blocks of cheese.

### **Customer Challenge:**

A cheese company had several cutting stations that currently used hydraulic cylinders to cut blocks of cheese. Due to increased food safety requirements, the manufacturer wanted to replace the hydraulic cylinders with electric cylinders to eliminate contamination concerns from the possibility of leaking hydraulic fluids. Because they were familiar with the long life of hydraulic cylinders, the manufacturer also required an electric cylinder with very long life.

### **Tolomatic Solution:**

An all stainless steel ERD30 electric cylinder with an IP69K rating was chosen and combined with an all stainless steel motor to provide a hygienic, long lasting electric solution. The actuator featured a roller screw to provide the customer with the long service life that they required.



ERD30RP WITH IP69K RATING, STAINLESS STEEL MOTOR AND HYG1 OPTION

# beverage automation needs!

## VOLUMETRIC FILLING



Volumetric filling for dairy products.

### **Customer Challenge:**

An OEM (Original Equipment Manufacturer) of volumetric filling equipment for dairy products needed a hygienic electric actuator solution for a revised equipment design. The electric actuators would replace the pneumatic cylinders on the existing design and create a cost effective, hygienic solution. Additionally, the electric actuators must seamlessly integrate with the existing Allen Bradley PLC (Programmable Logic Controller).

### **Tolomatic Solution:**

An all stainless steel ERD10 electric cylinder with protective motor enclosure and ACS (Actuator Control Solution) drive was chosen to provide the customer accurate, repeatable filling. The smooth, round bodied stainless steel construction of the ERD10 is a very hygienic design. The SS2 option for the ERD10 protects the motor in a stainless enclosure. The ERD10 with SS2 option provides IP69K protection from frequent wash-down cleanings. The ACS with Ethernet/IP easily connected to the Allen Bradley PLC and can daisy chain to multiple drives.

## BULK MEAT CHILLING



Bulk meat chilling.

### **Customer Challenge:**

An OEM of bulk product chilling equipment needed a hygienic electric actuator solution on a new design of equipment. The actuators needed to evenly steer meat product into a bulk container as the product moved down the conveyor. The actuators will work together to form an XY motion plane.

### **Tolomatic Solution:**

An all stainless steel ERD15 electric cylinder with protective motor enclosure and ACS (Actuator Control Solution) drive was chosen to provide the customer with infinite positioning capability. The smooth, round bodied stainless steel construction of the ERD15 is a very hygienic design. The SS2 option for the ERD15 protects the motor in a stainless enclosure. Assembled, the ERD15 with SS2 option provides protection from frequent wash-down cleanings. The ACS with analog position mode allowed the OEM to easily integrate the control with the existing PLC.

## MEAT SLICING



Meat slicing blade adjustment.

### **Customer Challenge:**

An OEM (of meat processing equipment) needed a solution to move the cutting blade with infinite positioning capability. The customer had been utilizing manual hand-crank adjustment which was time consuming to dial in the process and prone to human error. The electric actuator solution needed to be capable of connecting to an Allen Bradley CompactLogix® PLC utilizing Ethernet/IP®.

### **Tolomatic Solution:**

An all stainless steel ERD15 electric cylinder w/ protective motor enclosure and ACS (Actuator Control Solution) drive was chosen to provide the customer with infinite positioning capability. The ERD15 protects the motor in a stainless enclosure from frequent wash-down cleanings. The ACS with dual Ethernet ports is easily integrated into the Allen Bradley PLC.



ERD WITH SS2 OPTION

ACS SERVO DRIVE/CONTROLLER

# Tolomatic for all YOUR food &

## VOLUMETRIC FILLING



Custom designed high force corrosion resistant actuator for volumetric filling.

## ULTRASONIC CUTTING



A food-grade white epoxy paint RSA is used in ultrasonic food cutting in two directions.

## PUMPING CHEESE



Pumping liquid cheese through multiple piston assemblies to fill bags.

### Customer Challenge:

A designer and manufacturer of volumetric filling equipment wanted to deploy electric actuators to match the required line speed and move into position to fill trays for better performance and waste reduction. The challenge was to provide an electric actuator that could meet the demanding force, speed and duty cycle requirements with stainless steel construction and IP69K protection.

### Tolomatic Solution:

An entirely custom electric actuator was developed by Tolomatic. The round bodied actuator is made from 316 stainless steel that made it ideal for a wash down operating environment. In addition, Tolomatic deployed high force and long life roller screw technology, heavy duty bearings, corrosion resistant seals and adapted the actuator motor mount to the customer's choice of wash down motor.



CUSTOM STAINLESS STEEL ELECTRIC ACTUATOR

### Customer Challenge:

A manufacturer of ultrasonic cutting equipment used in bakeries was looking for an electric solution to replace their current pneumatic process. Multiple sizes of bakery products needed to be cut with speed and in multiple positions. They were looking for a food-grade white epoxy paint actuator and required a fast delivery.

### Tolomatic Solution:

Tolomatic used an IMA actuator with a food-grade epoxy painted surface and stainless steel rod and fastener components. The actuator provided the necessary positioning requirements for the bakery goods. In addition to the IMA, a food-grade epoxy paint B3W belt drive actuator was used to meet speed requirements on the vertical knife axis. The result was fast, uniform and smooth cuts. Tolomatic's fast delivery kept production on schedule.



FOOD-GRADE WHITE EPOXY PAINT IMA ROD-STYLE ELECTRIC ACTUATOR

### Customer Challenge:

A manufacturer of food products was using a large gearbox, motor, and mechanical cam assembly to pump liquid cheese into foil packages. This cam was creating a number of failure issues and the large gearbox was being replaced quite often. The customer was looking for an electric replacement that would handle constant operation with a 4- to 5-year life cycle. The product also needed to withstand a rigorous caustic wash down schedule.

### Tolomatic Solution:

An ERD30 rod-style electric actuator was recommended for this application to handle the force and extended duty cycle requirements. The ERD30 features a USDA approved, IP69K rated, "clean-in-place" design that can handle the frequent caustic wash downs.



ERD30 HYGIENIC ROD-STYLE ELECTRIC ACTUATOR

# beverage automation needs!

## CONVEYOR DOOR



Cleaning a section of the high speed pizza conveying machinery near the waste removal door powered by the B3W10.

### **Customer Challenge:**

A conveyor manufacturer needed to open and close a 6" door in about 1/2 second to support production of 180 units per minute. The actuator must hold up to washdown and cleaning chemicals.

### **Tolomatic Solution:**

Tolomatic's B3W10 belt-drive actuator was modified with nickel plating and stainless steel fasteners in response to the cleaning chemicals and washdown environment requirements. Supplied 3D CAD files made it easy for the customer to engineer the B3W10 into their equipment.



NICKEL PLATED B3W

## PACKAGING



Modular bagging system fills and seals a wide range of materials and bag sizes.

### **Customer Challenge:**

A leader in packaging technology was faced with the problem of compensating for inconsistent bag dimensions on its modular bag filling and sealing system. Irregularly sized bags required manual setup and were slowing the production process which required high-speed accuracy and flexibility.

### **Tolomatic Solution:**

Tolomatic supplied a series of customized electric screw drive actuators that precisely positioned the incoming bags before insertion into the filling/sealing line. Two actuators adjust the vertical position and two others center the bags in the tray. The results: Increased production; because the system automatically compensated for variations in bag lengths and widths while simultaneously eliminating the filling, sealing and leakage problems.



CUSTOM 2 DIRECTION  
B3S ELECTRIC ACTUATOR

## FRUIT PACKAGING



Sealed right angle gearbox replaced exposed gears which failed prematurely

### **Customer Challenge:**

A fruit packaging equipment manufacturer used exposed right angle gears to adjust the height of a sorting table. Frequent wash-down of the entire machine was required. Because of the wash-down, the exposed right angle gears were difficult to maintain and failed prematurely.

### **Tolomatic Solution:**

Tolomatic's standard corrosion resistant SRG-CR right angle gearbox replaced the exposed gears while keeping the same performance. The SRG-CR's sealed design increased reliability and lowered maintenance time. Also initial overall design cost and assembly time was lowered.



CORROSION RESISTANT  
SLIDE-RITE® GEARBOX

**Turn to Tolomatic for the best linear motion solutions for your applications.**

# The Tolomatic Difference Expect More From the Industry Leader:



## INNOVATIVE PRODUCTS

Tolomatic designs and builds the best standard products, modified products & unique custom products for your challenging applications.



## FAST DELIVERY

The fastest delivery of catalog products... Electric products are built-to-order in 15 days; Pneumatic & Power Transmission products in 5 days.



## ACTUATOR SIZING

Online sizing that is easy to use, accurate and always up-to-date. Find a Tolomatic electric actuator to meet your requirements.



## YOUR MOTOR HERE

Match your motor with compatible mounting plates that ship with any Tolomatic electric actuator.



## LIBRARY

Easy to access CAD files available in the most popular formats to place directly into your assembly.



## SUPERIOR SERVICE

Our people make the difference! Expect prompt, courteous replies to all of your application and product questions.

## Also Consider These Other Tolomatic Products:

### Electric Products

Rod & Guided Rod Style Actuators, High Thrust Actuators, Screw & Belt Drive Rodless Actuators, Motors, Drives and Controllers

"Foldout" Brochure #9900-9074



### Pneumatic Products

Rodless Cylinders: Band Cylinders, Cable Cylinders, Magnetically Coupled Cylinders/Slides; Guided Rod Cylinder Slides

"Foldout" Brochure #9900-9075



### Power Transmission Products

Gearboxes: Float-A-Shaft®, Slide-Rite®, Disc Cone Clutch; Caliper Disc Brakes

"Foldout" Brochure #9900-9076



3800 County Road 116 • Hamel, MN 55340, USA  
**Phone:** (763) 478-8000 • **Fax:** (763) 478-8080  
 Toll-Free: **1-800-328-2174**  
 sales@tolomatic.com • [www.tolomatic.com](http://www.tolomatic.com)

### EUROPEAN OFFICE

**Tolomatic Europe GmbH**  
 Herriotstraße 1  
 60528 Frankfurt am Main  
 Germany  
**Phone:** +49 69-6773-3143  
 EuropeSales@tolomatic.com

### CHINA FACILITY

**Tolomatic Automation Products (Suzhou) Co. Ltd.**  
*(ServoWeld® inquiries only)*  
 No. 60 Chuangye Street, Building 2  
 Huqiu District, SND Suzhou  
 Jiangsu 215011 - P.R. China  
**Phone:** +86 (512) 6750-8506  
**Fax:** +86 (512) 6750-8507  
 ServoWeldChina@tolomatic.com

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