

# FOOD & BEVERAGE SOLUTIONS





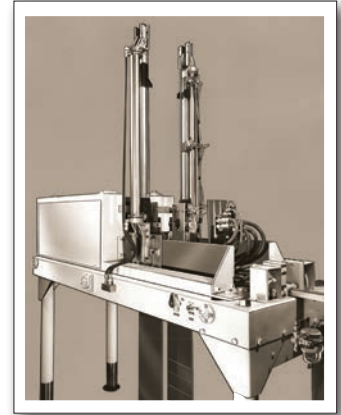
# Tolomatic™

## Automating the food & beverage industry since 1954

### Industry evolution sparked by revolutionary actuators.

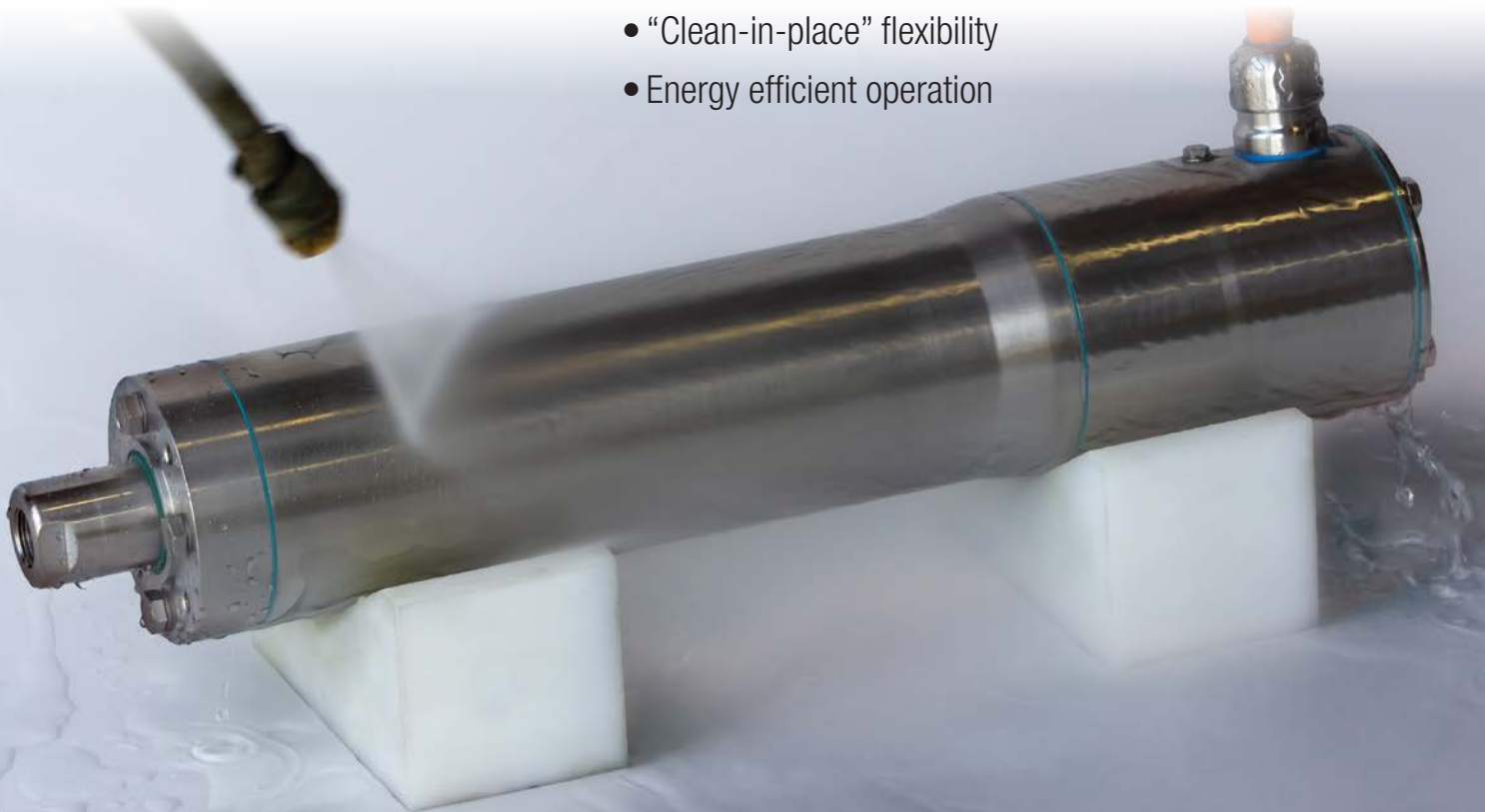
Tolomatic's founder Burton Toles designed our first products, the Float-A-Shaft® and the Cable Cylinder greatly improved the efficiency of an early bagger/sealer machine used in the flour milling industry.

Over 65 years later – Tolomatic's legacy of innovation continues to grow with unique and robust automation components to solve customers' food and beverage motion challenges.



### Tolomatic electric actuators provide:

- Hygienic design
- 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 ACTUATORS

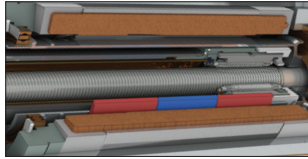
## ENDURANCE TECHNOLOGY<sup>SM</sup>

A Tolomatic Design Principle

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

### EFFICIENT INTEGRATED MOTOR DESIGN

- Skewed winding minimizes cogging torque for smooth, repeatable motion
- Low electric time constant motor for quick response
- Power dense

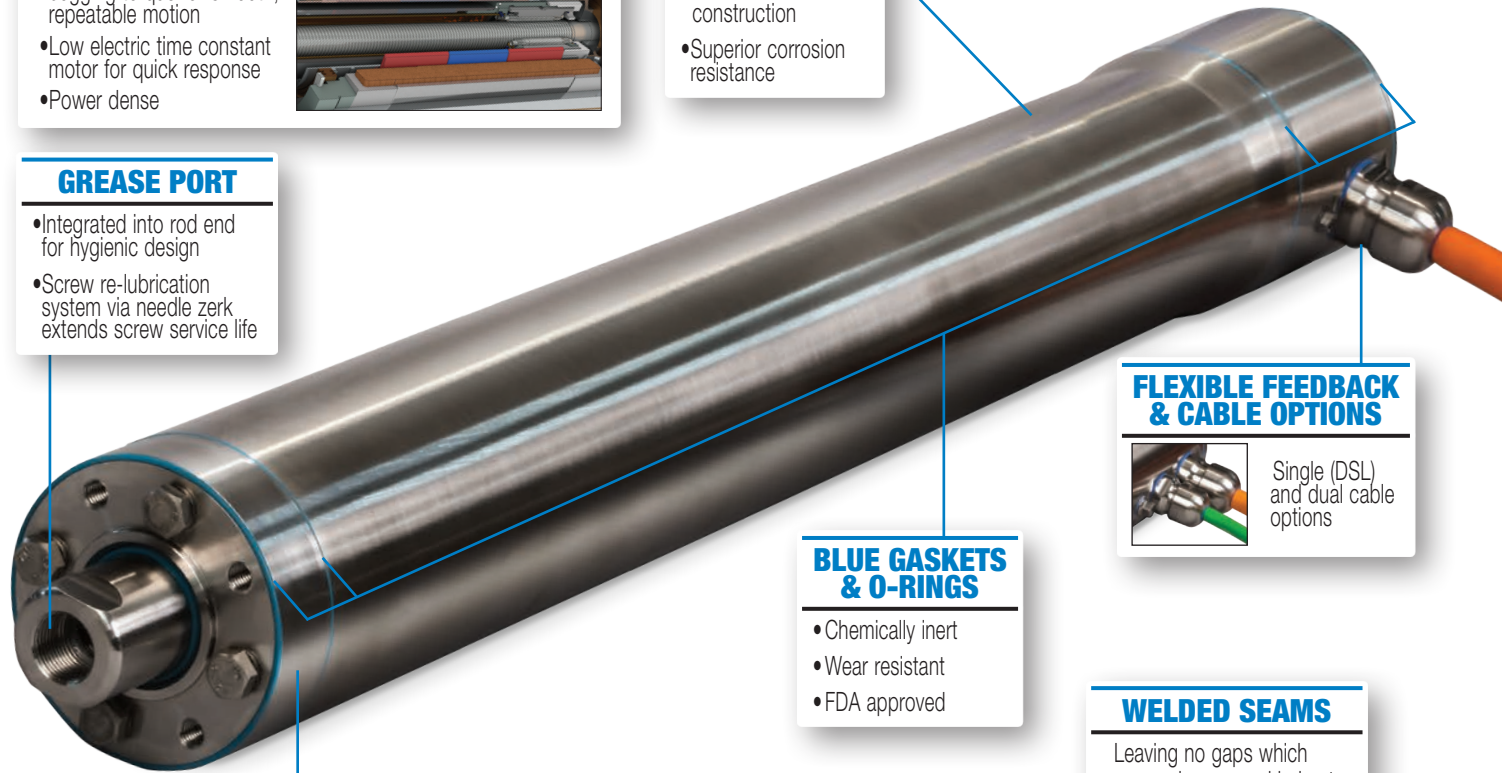


### STAINLESS STEEL DESIGN

- 316 Stainless steel construction
- Superior corrosion resistance

### GREASE PORT

- Integrated into rod end for hygienic design
- Screw re-lubrication system via needle zerk extends screw service life



### FLEXIBLE FEEDBACK & CABLE OPTIONS



Single (DSL) and dual cable options

### BLUE GASKETS & O-RINGS

- Chemically inert
- Wear resistant
- FDA approved

### WELDED SEAMS

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

### FIELD REPLACEABLE SEAL CARTRIDGE

- IP69K rated, wash-down protection
- Clean-in-place compatible
- FDA approved seal cartridge option

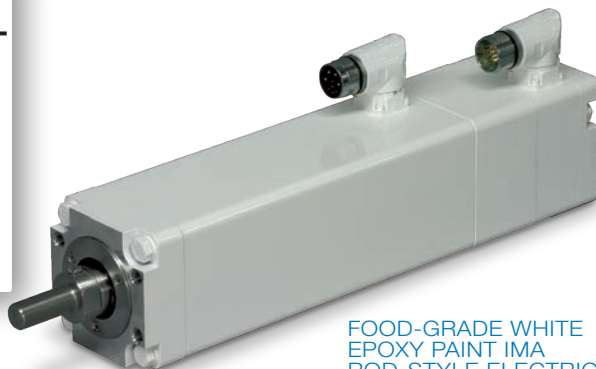
### MULTIPLE SCREW TECHNOLOGIES

- Roller screws provide the highest force and longest life
- Ball screws provide efficient motion at an economical price



### ADDITIONAL OPTIONS

- Brake
- Externally threaded rod end
- Front flange mount
- Rear clevis mount
- Hygienic fasteners
- FDA approved seal cartridge



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

ERD30RP WITH IP69K RATING, STAINLESS STEEL MOTOR AND HYG1 OPTION



Accepted Equipment  
USDA approved  
hygienic design





# Tolomatic™ for all YOUR food &

## BOTTLE FILLING



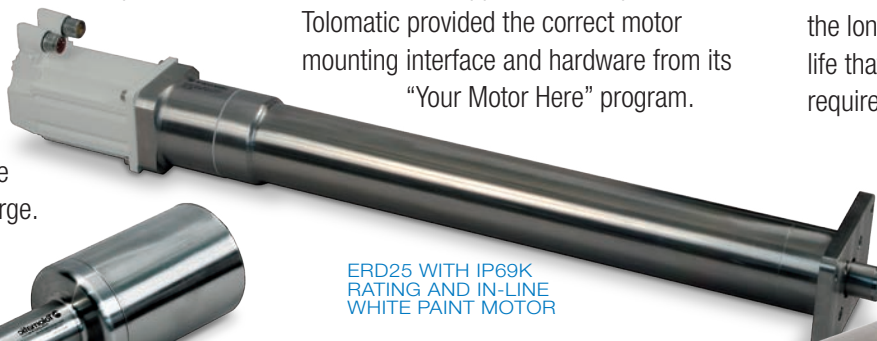
Fill four bottles simultaneously from the bottom up at various fill rates.

### **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.



ERD25 WITH IP69K RATING AND IN-LINE WHITE PAINT MOTOR

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.

## 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 REVERSE PARALLEL MOTOR AND HYG1 OPTION

# beverage automation needs!

## WALKING BEAM



Bulk meat chilling.

### **Customer Challenge:**

A major meat manufacturer has been looking for the right opportunity to eliminate a potential quality concern in their bulk meat cooling warehouses. These warehouses are used to cool down the sides of meat right after slaughter for a couple days prior to the next steps in processing. The sides of meat are stacked up on a 'walking beam' where they are hung on long straight racks on a slight incline. There is an actuator for each rack that keeps pushing up the line each successive side of meat, so the force required increases with every stroke.

### **Tolomatic Solution:**

An electric rod style actuator was the right technology choice to eliminate the potential hydraulic concerns. The meat cooler is not a hygienic wash down environment, so an RSA50-HT actuator with 18 inches of stroke and a ball nut was chosen for this hydraulic replacement. The customer did a field trial first, and then was confident enough to build a complete new facility with 100 actuators for this first new walking beam installation. The customer has been very satisfied with the electric actuators delivery dependable and clean performance day in and day out.



RSA-HT HEAVY DUTY, HIGH FORCE ELECTRIC ROD-STYLE ACTUATOR

## 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 had to seamlessly integrate with the existing Allen Bradley control system.

### **Tolomatic Solution:**

An all stainless steel IMAS22 hygienic integrated motor-actuator was chosen to provide the customer accurate, repeatable filling. The smooth, round bodied 316 stainless steel construction IMAS22 is a very hygienic design. The motor and actuator are integrated together in a compact stainless steel housing saving space and reducing bacterial growth. The IMA-S hygienic integrated motor-actuators provide seamless connectivity with Allen-Bradley Kinetix servo drives and have IP69K protection from frequent wash-down cleanings.



IMA22-STAINLESS STEEL INTEGRATED MOTOR AND ACTUATOR WITH IP69K RATING

## 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.

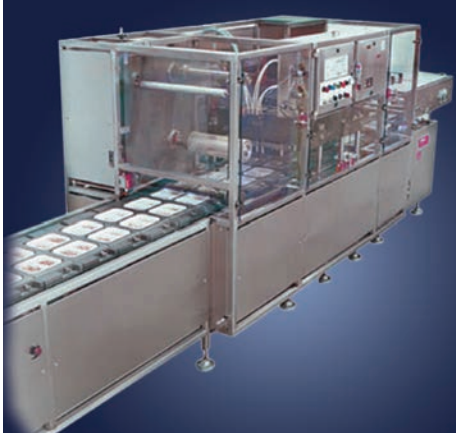
### **Tolomatic Solution:**

An all stainless steel IMAS33 hygienic integrated motor-actuator was chosen to provide accurate control of the cutting blade. The smooth, round bodied 316 stainless steel construction and IP69K environmental rating of the IMAS33 allowed the customer to save considerable time by cleaning and sanitizing the machine without removing the actuator. The IMA-S hygienic integrated motor-actuators also provide seamless connectivity with Allen-Bradley's latest Kinetix servo drives.



# 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.



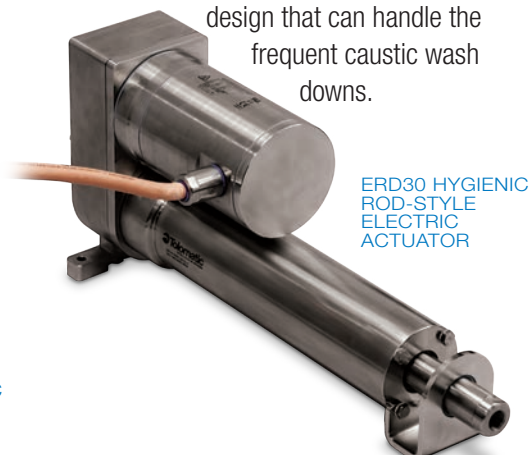
FOOD-GRADE WHITE EPOXY PAINT IMA ROD-STYLE ELECTRIC ACTUATOR

### **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!

## MEAT PRESS



High pressure meat pressing system to create a wide variety of deli meats.

### **Customer Challenge:**

An OEM (Original Equipment Manufacturer) of meat processing equipment uses high pressure pumping to compress meat into various pressed meats: from pepperoni to deli meat rolls for slicing. Due to some of the aggressive pressures required for this compression, hydraulic cylinders have been used as the primary driver of force. Tolomatic partnered with this OEM to develop an electric solution.

### **Tolomatic Solution:**

This OEM needed a very compact design that was built with stainless steel and white painted elements. We started with catalog products (RSA/R SX) and made significant modifications. In order to pack as much power into a small footprint and minimize the number of required servo motors, we designed them into a unique dual reverse parallel actuator system. Users are excited about the opportunity to eliminate hydraulics from this application.



FOOD-GRADE WHITE EPOXY PAINT RSX EXTREME FORCE ELECTRIC LINEAR ACTUATOR

## 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



# The Tolomatic Difference Expect More From the Industry Leader:



## INNOVATIVE PRODUCTS

Unique linear actuator solutions with Endurance Technology<sup>SM</sup> to solve your challenging application requirements.



## FAST DELIVERY

The fastest delivery of catalog products... Built-to-order with configurable stroke lengths and flexible mounting options.



## 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.



## TECHNICAL SUPPORT

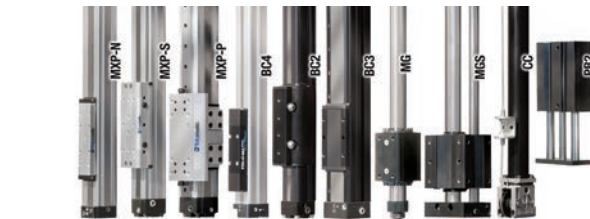
Extensive motion control knowledge: Expect prompt, courteous replies to any application and product questions from Tolomatic's industry experts.

## Tolomatic Product Families:

### Electric Products

Rod & Guided Rod Style Actuators, High Force 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<sup>®</sup>, Slide-Rite<sup>®</sup>; Caliper Disc Brakes; Planetary Roller Screws

"Foldout" Brochure #9900-9076

# Tolomatic<sup>TM</sup>

EXCELLENCE *IN MOTION*

COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
= ISO 9001 =  
Certified site: Hamel, MN

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