

# MATERIAL HANDLING SOLUTIONS



**STANDARD & CUSTOM ACTUATORS**

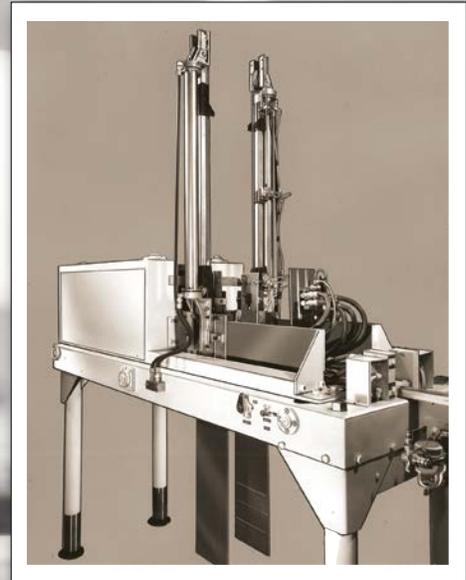
# Tolomatic™

## Automating the material handling 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 the original Tolomatic 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!

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



**Material handling solutions have been at the core of Tolomatic's business since the beginning in 1954.**

- Sorting
- Shuttling
- Conveying
- Wrapping
- Escapements
- Unwrapping
- Height adjustments
- Pressing
- Lifting
- Kick offs
- Stacking
- Swing arms
- Locating
- Diverting

# Trending Tolomatic products in the material handling industry

## MXB-S

The MXB-S solid bearing belt drive rodless actuator is a cost effective electric actuator for lighter loads.



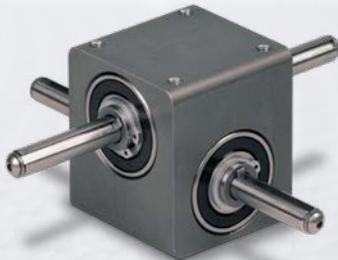
## ERD

The ERD electric cylinder, paired with a stepper or servo system, is the perfect alternative to pneumatic cylinders.



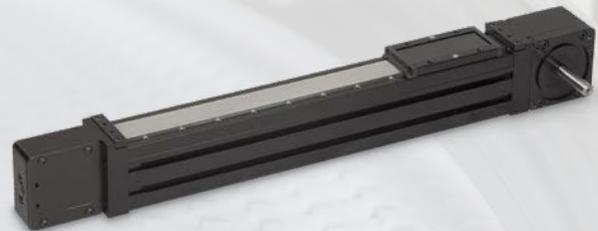
## Slide-Rite®

The Slide-Rite right angle gearbox is available in compact and standard sizes with CR (corrosion-resistant) models and three gear ratio selections.



## B3W

The B3W electric belt drive rodless actuator have an enclosed ball bearing design for heavy loads, high bending moments and long service life.



## RSA

The RSA electric rod actuator was designed with high performance, high force, dependability and mounting flexibility in mind.



## MXP-P

The MXP-P profiled rail pneumatic rodless cylinder offers high load carrying capacity, a low profile and long, reliable life.



# Tolomatic™ responds to YOUR ma

## LANE DIVERTING



Pneumatic cylinder replacement, product diverter for conveying line.

## PALLETIZING & SLIP SHEETING



Slip sheet placement on pallets for palletizing.

## DIVERTING & CONVEYING



Variable movement of products on roller belt conveying device.

### Customer Challenge:

A conveying machine builder had used pneumatic systems for product diverting but wanted to offer an electric conveying system to their customers. The existing machine design had proprietary controls that operated the pneumatic cylinder in a spring return operation with one digital output to the pneumatic valve. They wanted a solution that could be retrofitted in the field without redesigning the proprietary controls.

### Tolomatic Solution:

The ERD electric cylinder with a stepper drive was chosen as a cost effective pneumatic replacement. The customer leveraged Pneumatic Mode on the drive, which allowed the ERD electric cylinder to mimic the operation of the pneumatic cylinder. The customer did not need to change any programming or logic for the system to work.

### Customer Challenge:

A manufacturer of palletizers for bagged, bundled and baled products was looking for an efficient way to place a slip sheet on top of pallets to ready them for palletizing. The X-Y gantry process needed to be securely stabilized to allow slip sheets to be dropped in multiple positions on the pallets.

### Tolomatic Solution:

A MXP profiled rail pneumatic cylinder was selected to achieve the smooth linear motion required. One MXP actuator mounted on the X-axis moves to position the Y-axis MXP actuator over the paper sheets. The X-Y configuration moves down, picks up the sheet, moves up and over into a new position on a pallet. Sensors were implemented along the horizontal stroke of the X axis MXP actuator to signal position.

### Customer Challenge:

A builder of conveyor products, had recently replaced 2- and 3-position pneumatic cylinders with an electric open screw actuator solution. However, the actuator's open screw design was causing contaminant buildup and affecting performance. The application required variable loads and speeds depending on what products happened to be moving on the conveyors. The builder was also looking for a flexible solution for his customers whose applications required the conveyors to be washed down.

### Tolomatic Solution:

The Tolomatic ERD actuator was a perfect choice for this application. A standard ERD with a ball screw was selected for higher speeds. The actuator's all stainless steel enclosed design protected internal components from contaminants and corrosion, while the IP67 option provides the needed protection for the wash-down requirement.



ERD ROD-STYLE ELECTRIC ACTUATOR

PROFILED RAIL MXP32 PNEUMATIC RODLESS CYLINDER

ERD ROD-STYLE ELECTRIC ACTUATOR WITH SS2 STAINLESS STEEL ACTUATOR AND MOTOR ENCLOSURE

# Material handling automation needs!

## AUTOMATED SORTING



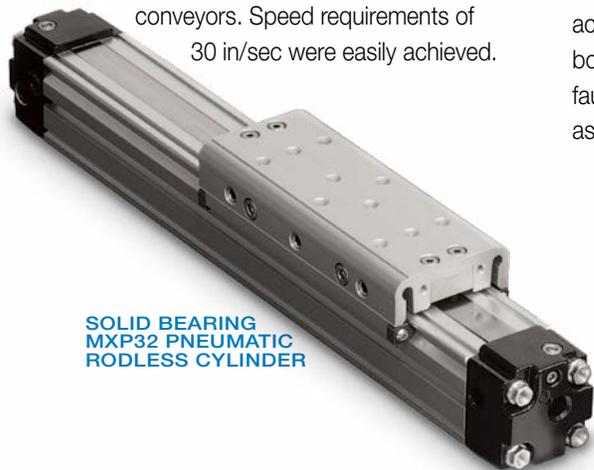
Automatic diverting and sorting of products on conveyors.

### Customer Challenge:

A manufacturer of sorting equipment had created in-house automation solutions but could not achieve the speed or reliability to keep up with their customer requirements. Production needed to increase, so more sorting locations were required with limited floor space.

### Tolomatic Solution:

An MXP rodless pneumatic cylinder with a solid bearing and a BC2 rodless cylinder was selected for this application because of their space-saving characteristics. The MXP cylinder sits perpendicular over the top of the conveyor and lowers a paddle. The BC2 cylinder then moves the paddle which pushes product both directions to different conveyors. Speed requirements of 30 in/sec were easily achieved.



SOLID BEARING  
MXP32 PNEUMATIC  
RODLESS CYLINDER

## LANE CHANGER



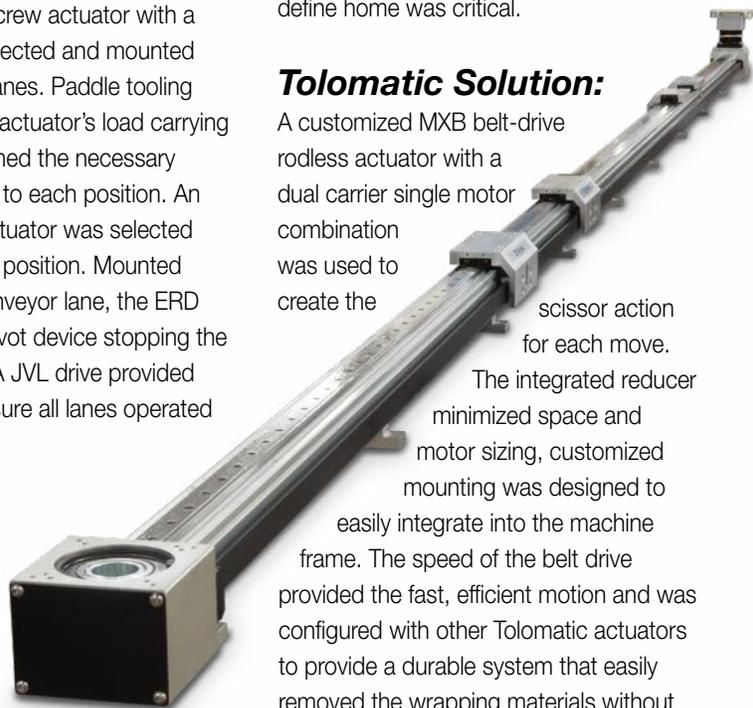
Lane changer for bottle conveyor.

### Customer Challenge:

A bottling process required bottles be shifted onto two conveyors and temporarily held in position. The application required multiple lane changeovers and as a result, the customer designated an electric motion solution to maximize energy efficiency.

### Tolomatic Solution:

An MXE25 rodless screw actuator with a solid bearing was selected and mounted over the conveying lanes. Paddle tooling was mounted to the actuator's load carrying device which performed the necessary lane diverting moves to each position. An ERD15 rod screw actuator was selected to hold the bottles in position. Mounted to the side of the conveyor lane, the ERD actuator pushes a pivot device stopping the bottles as required. A JVL drive provided fault feedback to ensure all lanes operated as required.



MXB32P WITH  
DUAL MOTION AND  
AUXILIARY CARRIERS

## REMOVE PACKAGING



Removing external packaging on bulk bundled material.

### Customer Challenge:

A major package handling/shipping company required a scissor action to remove wrapping materials from a variety of bulk shipments. The process needed to be fast, safe, smooth, efficient and reliable. The customer also wanted the equipment to be compact and quiet with no pneumatics or sensors – motion control sensing torque to define home was critical.

### Tolomatic Solution:

A customized MXB belt-drive rodless actuator with a dual carrier single motor combination was used to create the scissor action for each move. The integrated reducer minimized space and motor sizing, customized mounting was designed to easily integrate into the machine frame. The speed of the belt drive provided the fast, efficient motion and was configured with other Tolomatic actuators to provide a durable system that easily removed the wrapping materials without safety concerns.

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

# When the supply chain MUST work

## OVERHEAD PULL-OFF SYSTEM



Space saving BC2 rodless cylinder replaces bulky conveyor diverters.

### **Customer Challenge:**

A conveying machine needed a compact diverting device for an overhead pull-off system. 48 inches of stroke was required to move 150 pound boxes to a different conveyor line. Previously, a rod cylinder was horizontally mounted resulting in a cylinder extending about 48 inches beyond the width of the conveyor.

### **Tolomatic Solution:**

A BC2 rodless band cylinder was chosen for this application because its stroke is contained within the length of the cylinder itself. This results in a 43% space savings compared to an equivalent rod cylinder. The BC2 actuator also guides and supports the load throughout the entire stroke length, resulting in minimal seal and bearing wear with lower load deflection compared to rod-style cylinders.

AN ARTIST'S DEPICTION OF A BC2 USED IN AN OVERHEAD PULL-OFF SEE IT IN ACTION: [HTTP://YOUTU.BE/2D8VNUUTV1W](http://youtu.be/2D8VNUUTV1W)



## CASE PACKING CHANGE-OVER



In-case bottle filling with RSA electric actuator replaces labor intensive pneumatic system.

### **Customer Challenge:**

A manufacturer of pre-form liquid containers had several lines of case packers in a variety of bottle and case sizes. The lines utilized intermittent motion that featured pneumatic cylinders but the cycle times were too slow. They wished to reduce the time for changeovers, eliminate manual adjustments and the need for rod spacers.

### **Tolomatic Solution:**

Using the Tolomatic online sizing and selection tool, an RSA50 electric rod style actuator was selected to improve cycle time. Each different bottle and case size is programmed in one time, requiring no manual adjustment or rod spacers.

Tolomatic's "Your Motor

Here" program allowed the customer unlimited flexibility to select their choice of motor and drive combination to power the actuator.

RSA50 ELECTRIC ROD-STYLE ACTUATOR WITH YMH MOTOR MOUNT



## LANE CHANGER



Quick, automated product change-over for expanded product offerings.

### **Customer Challenge:**

A bottling plant needed to quickly change between different sizes and shapes of blow form molded bottles. The previous solution involved pneumatic cylinders with snap-on rings that provided a third position by using a hard stop to shorten the cylinder's extend limit. Workers manually remove and install the rings in a very time consuming process.

### **Tolomatic Solution:**

Tolomatic ERD15 electric rod-style actuators, controlled by stepper controllers with EtherNet/IP, allow for infinite positioning. The compact size and mounting options allowed the ERD15 to retrofit into the space used for the pneumatic cylinders.



ERD ROD-STYLE ELECTRIC ACTUATOR

# - put Tolomatic™ to work for you.

## CONVEYOR DOOR



Cleaning a section of a high speed pizza conveying machinery near a waste removal door.

### **Customer Challenge:**

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

### **Tolomatic Solution:**

Tolomatic's B3W10 belt-drive actuator was modified with nickel plating and corrosion resistant fasteners to withstand the cleaning chemicals, wash-down and environmental requirements. Supplied 3D CAD files made it easy for the customer to engineer the B3W10 into their equipment.

NICKLE PLATED B3W

## BAG FILLING / HANDLING



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: variations in bag lengths and widths are automatically compensated for eliminating filling, sealing and leakage problems and increasing production.

CUSTOM 2 DIRECTION B3S ELECTRIC ACTUATOR

## 2 LEVEL FILLING STATION



Accurately position and fill boxes at the filling station of a conveying system.

### **Customer Challenge:**

A manufacturer of conveying systems had two goals: Keep the filling station as compact as possible and shorten the time at the station. The two step filling process begins by positioning the empty box at the filling station. After filling is complete the box is moved onto the conveyor leading to the packaging station.

### **Tolomatic Solution:**

Using BC2 rodless cylinders for both steps reduced the footprint of the filling station while eliminating the need for external guided rails and bearings. Reed switches signal the PLC to provide the necessary feedback for each completed move - resulting in the fast throughput required.

STANDARD BC212 & BC215 WERE USED IN THIS FILLING STATION

**From ACCUMULATOR CONVEYORS to WEIGH CHECK STATIONS  
Tolomatic is your smartest automation choice**

# The Tolomatic Difference Expect More From the Industry Leader:



## INNOVATIVE PRODUCTS

Solutions with Endurance Technology<sup>SM</sup> for challenging applications.



## FAST DELIVERY

Built-to-order with configurable stroke lengths and flexible mounting options.



## ACTUATOR SIZING

Size and select electric actuators with our online software.



## YOUR MOTOR HERE<sup>®</sup>

Match your motor to compatible mounting plates with Tolomatic actuators.



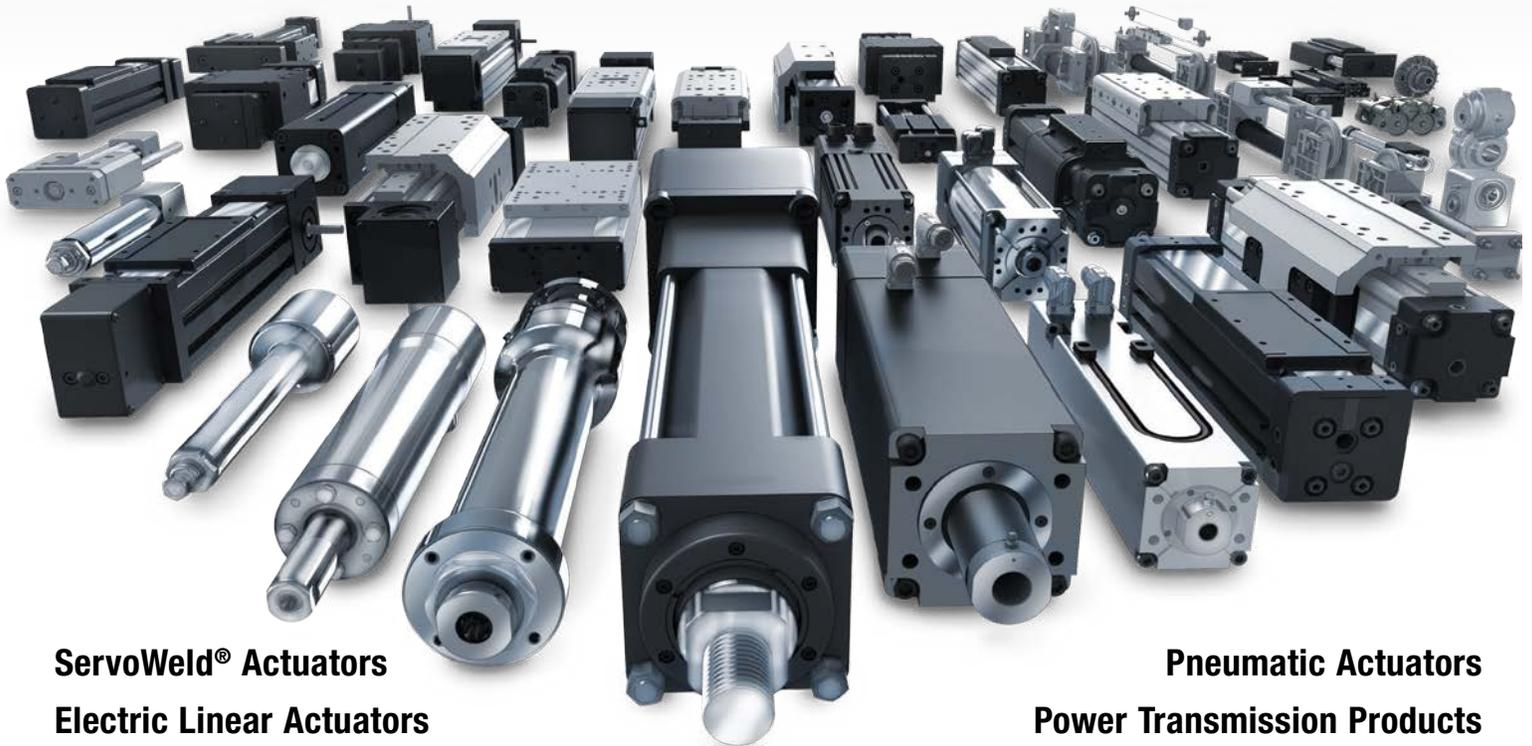
## CAD LIBRARY

Download 2D or 3D CAD files for Tolomatic products.



## TECHNICAL SUPPORT

Get a question answered or request a virtual design consultation with one of our engineers.



**ServoWeld<sup>®</sup> Actuators**  
**Electric Linear Actuators**

**Pneumatic Actuators**  
**Power Transmission Products**



MADE IN U.S.A.

# Tolomatic<sup>TM</sup>

EXCELLENCE IN MOTION

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

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