CORPORATE OVERVIEW

LINEAR MOTION SOLUTIONS
Growth powered by innovation  
Service exceeding customer expectations

WORLD’S FIRST RODLESS CYLINDER
• Burton Toles founded Tolomatic in 1954 by creating an automatic bagging machine for the flour industry in Minneapolis, MN
• Invented Float-A-Shaft® right angle gearboxes
• Invented Cable Cylinders – world’s first rodless pneumatic cylinder

PNEUMATIC PRODUCT LINE EXPANDS
• First pneumatic rodless band cylinder with load support
• First manufacturer to produce all four types of rodless actuators—cable, band, slides, and magnetically coupled

MOTION CONTROL & ELECTRIC ACTUATORS
Since the 1990’s, Tolomatic responded to industry demands for improved accuracy, repeatability, and efficiency as well as more advanced motion control technology.
• Products designed for pneumatic & hydraulic replacement
• World’s first USDA approved, stainless steel, IP69k, hygienic actuators
• Compact, power dense, high performance integrated servo actuators
• Widest range of rod-style & rodless electric actuators
• Configurable stroke lengths at industry best lead times
• Your Motor Here® program for flexible motor mounting
• Online sizing & selection software designed for OEM & distributor use

COMPACT, HIGH PERFORMANCE INTEGRATED SERVO ACTUATORS
• ServoWeld® - Innovative design developed for Automotive industry
• Widest range of integrated models to meet specific industry needs

SMART ACTUATION SOLUTIONS
• Complete single axis actuator solutions with integrated servo motor
• Pre-configured, pre-tuned, tested and available with most popular Ethernet protocols

PLANETARY ROLLER SCREW DESIGNS
• Full in-house production for industry leading delivery and rigorous quality control

CONTINUOUS INVESTMENTS TO SERVE CUSTOMERS
Tolomatic continues to invest in facilities, processes, equipment and people to serve a broad array of customers.
• Quality system certified to ISO 9001:2015 standard
• Corporate headquarters and factory in suburban Minneapolis, MN
• Extensive machine shop, prototype testing lab
• Facilities in China, Europe and Mexico

Innovative motion control products, exceptional quality and service... that’s Tolomatic
Tolomatic's Design Philosophy:

**ENDURANCE TECHNOLOGY**

Designed for maximum durability to provide extended service life. Shown are the Endurance Technology features of the RSA-HT.

- **IP67 OPTION**
  - Ingress protection against water and dust

- **LUBRICATION**
  - Convenient, patented re-lubrication feature

- **ANTI-ROTATE**
  - Robust anti-rotation feature also provides screw support

- **BEARINGS**
  - Enhanced high force bearings

- **BELT MATERIAL**
  - High strength belt material

- **SCREW TECHNOLOGY**
  - Roller screw and ball screw options

- **STEEL THRUST ROD**
  - Salt bath nitride treatment for hardness and resistance to adherence of potential contaminants

- **BUMPERS**
  - Heavy duty internal bumpers

- **YOUR MOTOR HERE**
  - Flexible mounting for popular motors
  - Inline & reverse parallel

**Tolomatic makes it easy to select the right product for most applications**

**Engineering Tools on www.tolomatic.com**

- CONTACT AN ENGINEER
- ACTUATOR SIZING
- CAD LIBRARY
- YOUR MOTOR HERE®
- ELECTRIC ACTUATORS E-BOOK
- TOLOMATIC IPAD APP

**www.tolomatic.com**

- 1-800-328-2174
Tolomatic Linear Motion Solutions

**AUTOMOTIVE**
- Resistance Spot Welding, Joining, Pressing, Riveting, Stamping, Nut Placement
- Compact, Lightweight
- Integrated Servo Motor
- Long Life Roller Screw Design

**FOOD & BEVERAGE**
- Volumetric Filling, Pumping, Cutting, Slicing, Sorting
- Electric & Pneumatic Rodless Actuators
- Configurable Stroke Lengths
- Wide Array of Load and Speed Capabilities
- Flexible Motor Mounting

**PACKAGING**
- Positioning, Sealing, Forming, Pressing, Palletizing, Filling
- Electric & Pneumatic Rodless Actuators
- Configurable Stroke Lengths
- Wide Array of Load and Speed Capabilities
- Flexible Motor Mounting

**INSPECTION, SEMICONDUCTOR & ELECTRONICS**
- Measurement, Geometry Inspection, Weld Inspection

**MEDICAL, PHARMA & LIFE SCIENCE**
- Coating, Positioning, Rehabilitation, Injection, Pick & Place

**CONVEYING & MATERIAL HANDLING**
- Diverting, Sorting, Transfers, Palletizing, Change-Over, Case Packing, Labeling

**PAPER & PRINTING**
- Camera Positioning, Cutting, Product Feeder, Tensioning, Winding, Unwinding

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for Most Industries and Applications

SAWMILL / TIMBER
- Planing, Fencing, Guides, Positioning, Feed Control, Veneer Lathe

RSA-HT Rugged, IP67 Roller Screw Designs
- Clean, Leak-Free Technology
- Rugged, IP67 Designs
- Roller Screw Driven
- Consistent Operation in a Wide Range of Temperatures

FLUID POWER REPLACEMENT
- Replacing Pneumatic Cylinders, Replacing Hydraulic Cylinders

ERD 10-20 Economical, Pneumatic Class Electric Actuators
- Flexible & Efficient
- Full Motion Control Capabilities
- Minimal Maintenance
- Reliable Long Life
- Lowest Total Cost of Ownership

METALS & FABRICATION
- Casting, Cutting, Bending, Punching, Clenching

RSX High Force, Hydraulic Class Electric Actuators
- Roller Screw Driven
- Reliable Long Life
- Robust Design

ANIMATION & ENTERTAINMENT
- Animatronics, Camera Positioning, Prop Actuation, Exhibit Automation, Simulators

AEROSPACE, DEFENSE & SECURITY
- Security Barriers, Flight Simulators, Munitions Assembly, Motion Simulators

OIL, GAS & PROCESS CONTROLS
- Well Control, Flow Control, Choke Valve Control, MPD, Rig Automation

MACHINE TOOLS
- Door Automation, Positioning, Drilling

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**ERD ECONOMICAL**

**SOLUTION FOR:**
- Pneumatic cylinder replacement
- General automation

**STANDARD FEATURES:**
- Stainless steel housing & thrust rod
- Ball or Acme screw driven
- Your Motor Here® flexible inline or reverse parallel motor mounting

**OPTIONS:**
- Stainless steel construction upgrade
- IP67 & IP69k ingress protection
- Internal anti-rotate
- External guided tooling plate
- Metric mounting and rod-end accessories
- Reed, solid state PNP or NPN switches, quick-connect available

**SPECIFICATIONS:**

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**ERD STAINLESS STEEL, HYGIENIC**

**SOLUTION FOR:**
- Pneumatic & hydraulic replacement
- Food & beverage processing

**STANDARD FEATURES:**
- Full Stainless steel construction
- Roller, Ball or Acme screw driven
- Your Motor Here® flexible inline or reverse parallel motor mounting

**OPTIONS:**
- Stainless steel protective motor enclosure
- IP69k ingress protection
- Internal anti-rotate
- Metric mounting and rod-end accessories
- Reed, solid state PNP or NPN switches, quick-connect available

**SPECIFICATIONS:**

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**RSA INDUSTRIAL: ST/HT**

**SOLUTION FOR:**
- Pneumatic & hydraulic replacement
- General automation

**STANDARD FEATURES:**
- Anodized aluminum design
- Roller, Ball or Acme screw driven
- Internal anti-rotate
- Your Motor Here® flexible inline or reverse parallel motor mounting

**OPTIONS:**
- IP67 ingress protection
- Metric or US Standard mounting and rod-end accessories
- Reed, solid state PNP or NPN switches, quick-connect available

**SPECIFICATIONS:**

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**MAX. STROKE**

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**MAX. STROKE**

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**RSX EXTREME FORCE**

**SOLUTION FOR:**
- Hydraulic replacement
- Heavy duty applications

**STANDARD FEATURES:**
- Steel tie rods and hard coat anodized aluminum design
- Roller screw driven
- Internal anti-rotate
- Your Motor Here® flexible inline or reverse parallel motor mounting

**OPTIONS:**
- IP67 ingress protection
- Metric and rod-end accessories
- Reed, solid state PNP or NPN switches, quick-connect available

**SPECIFICATIONS:**

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<tr>
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**FAST DELIVERY**  
**BUILT-TO-ORDER**

**ELECTRIC LINEAR MOTION PRODUCTS**

*Contact Tolomatic for price and lead time*

**www.tolomatic.com  • 7 •       1-800-328-2174**

---

**ROD STYLE SCREW DRIVE ACTUATORS**

**SOLUTION FOR:**
- Pneumatic & hydraulic replacement
- High performance applications

**STANDARD FEATURES:**
- Anodized aluminum design
- Roller or ball screw driven
- Integrated servo motor (230 or 460 Vac) with skewed winding
- Grease port (patented) for easy re-lubrication
- IP65 ingress protection

**OPTIONS:**
- Connector & feedback options for leading servo drive / control manufacturers
- White epoxy, food grade coating with stainless hardware
- IP67 ingress protection
- Holding brake
- Metric mounting & rod-end accessories

**SOLUTION FOR:**
- Food & beverage processing

**STANDARD FEATURES:**
- 316 stainless steel construction
- Hygienic design
- Roller or ball screw driven
- Integrated servo motor (230 or 460 Vac) with skewed winding
- Food grade lubrication and grease port (patented) for easy re-lubrication
- IP69k ingress protection

**OPTIONS:**
- Cabling, connector & feedback options for leading servo drive / control manufacturers
- EHEDG fasteners
- Field replaceable front head & seal
- Internal anti-rotate (IMASA33)
- Holding brake
- Metric mounting & rod-end accessories

---

**IMA COMPACT, INTEGRATED SERVO**

**SOLUTION FOR:**
- General automation
- Guided loads

**STANDARD FEATURES:**
- Anodized aluminum design
- Ball or Acme screw driven
- Hardened guide rods with four bearing surfaces
- Your Motor Here® flexible inline or reverse parallel motor mounting

**OPTIONS:**
- Composite or linear ball bearings
- Standard, oversized or stainless steel guide rods
- Metric or US Standard mounting
- Reed, solid state PNP or NPN switches, quick-connect available

**SPECIFICATIONS:**

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**IMA-S HYGIENIC, INTEGRATED SERVO**

**SOLUTION FOR:**
- Food & beverage processing

**STANDARD FEATURES:**
- 316 stainless steel construction
- Hygienic design
- Roller or ball screw driven
- Integrated servo motor (230 or 460 Vac) with skewed winding
- Food grade lubrication and grease port (patented) for easy re-lubrication
- IP69k ingress protection

**OPTIONS:**
- Cabling, connector & feedback options for leading servo drive / control manufacturers
- EHEDG fasteners
- Field replaceable front head & seal
- Internal anti-rotate (IMASA33)
- Holding brake
- Metric mounting & rod-end accessories

---

**IMA 22 33 44 55**

**MAX. STROKE** in mm: 12 18 24 18 18 18 18
**MAX. FORCE** lbf: 325 1000 2500 3000 4000 3000 6875
**MAX. SPEED** in/sec: 19.6 19.6 19.6 19.6

**IMA-S 22 33 33SA**

**MAX. STROKE** in mm: 12 18 18 12
**MAX. FORCE** lbf: 325 1000 2500 2500
**MAX. SPEED** in/sec: 19.6 19.6 19.6 19.6

---

**GSWA**

**SOLUTION FOR:**
- 7th axis robotic resistance spot welding
- Pedestal / projection welding

**STANDARD FEATURES:**
- Anodized aluminum design
- Roller screw driven
- Integrated servo motor (230 or 460 Vac) with skewed winding
- IP65 ingress protection

**OPTIONS:**
- Feedback device & connector integration for leading robot manufacturers
- EHEDG fasteners
- Field replaceable front head & seal
- Internal anti-rotate (IMASA33)
- Holding brake
- Metric mounting

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*Contact Tolomatic for price and lead time*
**MXE-S SOLID BEARING**

**SOLUTION FOR:**
- Light to moderate loads & moments

**STANDARD FEATURES:**
- Self-lubricating solid bearing

**OPTIONS:**
- Floating mount

**COMMON STANDARD FEATURES:**
- Anodized aluminum design
- Stainless steel dust band
- Ball or Acme screw driven
- Large mounting pattern for high load stability
- Your Motor Here® flexible motor mounting

**COMMON OPTIONS:**
- Auxiliary carrier for higher load & moment capacity
- Metric or US Standard mounting
- Reed, solid state PNP or NPN switches

**SPECIFICATIONS:**

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*Auxiliary carrier option offers increased load and bending moment capacity

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**MXE-P PROFILED RAIL BEARING**

**SOLUTION FOR:**
- Moderate to high loads & moments
- Stable, precision load guidance

**STANDARD FEATURES:**
- Anodized aluminum design
- Load bearing carrier design with internal re-circulating ball bearings
- Hardened steel rail guides
- Stainless steel sealing band
- Ball or Acme screw driven
- Your Motor Here® flexible motor mounting

**OPTIONS:**
- Auxiliary carrier
- Dual 180° carrier
- Metric or US Standard mounting
- Reed, solid state PNP or NPN switches

**SPECIFICATIONS:**

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<td>133</td>
<td>131</td>
</tr>
<tr>
<td>mm</td>
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<td>1524</td>
<td>1524</td>
</tr>
<tr>
<td>lb</td>
<td>591</td>
<td>1454</td>
<td>2008</td>
</tr>
<tr>
<td>N</td>
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<td>6448</td>
<td>8932</td>
</tr>
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*Dual 180° & auxiliary carrier options offer increased load and bending moment capacity

---

**B3S INTERNAL RE-CIRCULATING BALL BEARING**

**SOLUTION FOR:**
- High requirements for flatness, straightness & accuracy

**STANDARD FEATURES:**
- Anodized aluminum design
- Load bearing carrier design with internal re-circulating ball bearings
- Hardened steel rail guides
- Stainless steel sealing band
- Ball or Acme screw driven
- Your Motor Here® flexible motor mounting

**OPTIONS:**
- Auxiliary carrier
- Dual profile rail linear table design
- Ball screw driven
- Inline or reverse-parallel motor mount

**SPECIFICATIONS:**

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<tr>
<th>TKS</th>
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*Auxiliary carrier option offers increased load and bending moment capacity

---

**RODLESS SCREW DRIVE ACTUATORS**

---

*www.tolomatic.com*
**MOTION PRODUCTS**

**RODLESS BELT DRIVE ACTUATORS**

**MXB-U NO BEARING**

**SOLUTION FOR:**
- Loads that are externally guided and supported

**COMMON OPTIONS:**
- Metric or US Standard mounting
- Reed, solid state PNP or NPN switches

**MXB-U SOLUTION FOR:**
- Light to moderate loads and moments

**COMMON STANDARD FEATURES:**
- Anodized aluminum design
- Belt driven: High power polyurethane HTD tooth profile with steel tensile members
- Large mounting pattern for high load stability
- High Speed  • External bumpers
- Your Motor Here® flexible motor mounting

**MXB-S SOLUTION FOR:**
- Light to moderate loads and moments

**MXB-S SOLID BEARING**

**STANDARD FEATURES:**
- Self-lubricating solid bearing

**OPTIONS:**
- Floating mount
- Auxiliary carrier for higher load & moment capacity

**MXB-P PROFILED RAIL BEARING**

**MXB-P SOLUTION FOR:**
- Moderate to high loads and moments

**STANDARD FEATURES:**
- Stable, precision load guidance

**OPTIONS:**
- Auxiliary carrier for higher load & moment capacity

**MXB-P PROFILES:**
- MXB-U = 200 in/sec  •  MXB-S = 100 in/sec  •  MXB-P = 150 in/sec

**MXB-P SPEED:**
- MXB-U = 5080 mm/sec  •  MXB-S = 2540 mm/sec  •  MXB-P = 3810 mm/sec

**B3W RE-CIRCULATING BALL BEARING**

**SOLUTION FOR:**
- Moderate to high loads & moments

**COMMON OPTIONS:**
- Auxiliary carrier  • Dual 180° carrier for higher load & moment capacity

**STANDARD FEATURES:**
- Anodized aluminum design
- Load bearing carrier design with internal re-circulating ball bearings
- Hardened steel rail guides
- Stainless steel sealing band
- Belt driven: steel reinforced belts
- Your Motor Here® flexible motor mounting

**OPTIONS:**
- Metric or US Standard mounting
- Reed, solid state PNP or NPN switches

**B3W SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>LOAD</th>
<th>MAX. STROKE</th>
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<th>MAX. SPEED</th>
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<td>lb</td>
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<td>591</td>
<td>3062</td>
<td>1454</td>
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</tr>
<tr>
<td>667</td>
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<tr>
<td>157</td>
<td>200</td>
<td>200</td>
<td>3988 5080 5080</td>
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**SOLVENTS & MOTORS**

**ACSI INTEGRATED MOTOR/DRIVE/CONTROLLER**

**STANDARD FEATURES:**
- Integrated servo motor/drive
- NEMA 23 & 34 frame sizes
- Single axis smart actuation solution
- Mounted, configured, tuned & tested as an actuator system
- Dual Ethernet ports: EtherNet/IP™, Profinet®, EtherCAT & Modbus TCP
- 10-60 VDC

**ACS SERVO & STEPPER DRIVES**

**SELECT A COMPLETE SYSTEM FROM TOLOMATIC OR ADD ANY MOTION SYSTEM TO TOLOMATIC’S ACTUATORS**

**YOUR MOTOR HERE® MADE-TO-ORDER MOTOR MOUNTS.**
- Tolomatic will provide a motor-specific interface for nearly any motor.

Visit [www.tolomatic.com/ymh](http://www.tolomatic.com/ymh) to find your motor/actuator match!
PNEUMATIC ACTUATORS

Graphs are general performance comparisons between cylinders of similar (1" bore) sizes with 12" stroke. Maximum force is based on air pressure of 100 PSI. See www.tolomatic.com for complete performance information.

SOLUTION FOR:
• Guiding and supporting light loads
• Good for vertical applications or with externally guided loads

STANDARD FEATURES:
• Durable self-lubricating internal bearing performance tested for millions of cycles

COMMON STANDARD FEATURES:
• Non-wear stainless steel bands
• Adjustable internal end-of-stroke cushion

SOLUTION FOR:
• Guiding and supporting medium loads
• Loads requiring increased moment capacity

STANDARD FEATURES:
• Increased moment capacity carrier design with self-lubricating bearings
• Trapezoidal bearing design maximizes bearing surface area for less pressure & less wear on bearing surfaces
• Isolated piston extends service life of the piston seals

COMMON OPTIONS:
• Tube clamps
• Auxiliary carrier
• Adjustable and fixed shock absorbers

SOLUTION FOR:
• Guiding and supporting heavy loads
• High speed and precision
• Vertical orientation or cantilevered loads

STANDARD FEATURES:
• Long life recirculating ball bearings
• Largest moment load capacity
• Low carrier height
• Isolated piston extends service life of the piston seals

OPTIONS:
• Auxiliary carrier   • Dual 180° carrier
• Adjustable shock absorbers  • Foot mount
• Single end porting   • Tube supports
• Reed or solid state position sensors
• Metric or US Standard mounting

SPECIFICATIONS:

<table>
<thead>
<tr>
<th>BORE SIZE</th>
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<td>1.25</td>
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<td>25</td>
<td>32</td>
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*Auxiliary carrier doubles the load capacity and also increases My and Mz bending moment capacity.

MXP-N INTERNAL BEARING

MXP-S SOLID BEARING

MXP-P PROFLED RAIL BEARING

BC3 INTERNAL BALL BEARING

SOLUTION FOR:
• Guiding and supporting heavy loads
STANDARD FEATURES:
• Reliable, maintenance free bearing system
• Bearing components are sealed and lubricated at the factory
• Hardened steel rail guides for high performance and repeatable accuracy
• Stainless steel sealing band system
• Adjustable internal end-of-stroke cushion
• Integral mounting system
• Isolated piston extends service life of the piston seals

OPTIONS:
• Auxiliary carrier   • Dual 180° carrier
• Adjustable shock absorbers  • Foot mount
• Single end porting   • Tube supports
• Reed or solid state position sensors
• Metric or US Standard mounting

SPECIFICATIONS:

<table>
<thead>
<tr>
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*Auxiliary and dual 180° carrier doubles the load capacity and also increases My and Mz bending moment capacity.
**ACTUATORS**

**BC2 SOLID BEARING**

**SOLUTION FOR:**
- Guiding and supporting medium loads

**STANDARD FEATURES:**
- Increased moment capacity carrier design w/ self-lubricating bearings
- Adjustable carrier for maintaining consistent bearing surfaces
- Stainless steel sealing band system
- Adjustable internal end-of-stroke cushion
- Formed steel piston bracket
- Isolated piston extends service life of the piston seals

**OPTIONS:**
- Auxiliary carrier
- Four ported head
- Floating mount
- Foot mount
- Tube support
- Adjustable shock absorbers
- Reed or solid state position sensors
- Metric or US Standard mounting

**SPECIFICATIONS:**

<table>
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*Auxiliary carrier doubles the load capacity and also increases My and Mz bending moment capacity.

**TC TRACK- GUIDE RODS & BEARING**

**SOLUTION FOR:**
- Guiding and supporting light loads

**STANDARD FEATURES:**
- Nylon jacketed aircraft grade cables
- Lightweight aluminum design
- Unique gland seals provide leak free seal for cables
- Adjustable internal end-of-stroke cushion

**OPTIONS:**
- Automatic tensioner
- Caliper disc brake
- 3 ported head
- Pneumatic or hydraulic power
- Steel tube
- Seals of Viton® material
- Reed position sensors

**SPECIFICATIONS:**

<table>
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<td>267</td>
<td>267</td>
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<td>67</td>
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**CC DOUBLE-ACTING**

**SOLUTION FOR:**
- Loads that are externally guided and supported

**STANDARD FEATURES:**
- Nylon jacketed aircraft grade cables
- Unique gland seals provide leak free seal for cables
- Adjustable internal end-of-stroke cushions
- Actuator may be located remotely from load and contamination
- Stroke lengths up to 60 feet with optional tube couplers

**OPTIONS:**
- Pneumatic or hydraulic power
- 3 ported head
- Steel tube
- Seals of Viton® material
- Reed position sensors
- **Automatic tensioner***
- **Caliper disc brake***
- **Tube coupler***

***Not available for SA

**SPECIFICATIONS:**

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<td>267</td>
<td>267</td>
<td>267</td>
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</tbody>
</table>

*Bending Moments Diagram

Reference for all comparison graphs

Mx = Roll
My = Pitch
Mz = Yaw
Fz = Load

100 PSI. See www.tolomatic.com for complete performance information.
RODLESS CYLINDERS

MG CYLINDER

SOLUTION FOR:
• Environmentally sensitive applications that require low contamination
• If magnetic coupling strength is exceeded the piston and carrier will decouple - a safety benefit in many applications

STANDARD FEATURES:
• Field repairable to minimize downtime
• Fully enclosed design keeps contaminants from entering or lubricants from exiting actuator body
• Three coupling strengths available
• Stainless steel tubing

OPTIONS:
• Pneumatic or hydraulic power
• Floating mount • Foot mount
• Reed or solid state position sensors

SPECIFICATIONS:

ROD CYLINDER SLIDES

PB2 POWER-BLOCK2 SLIDE

SOLUTION FOR:
• Withstands heavy side loads
• Great for conveyor line stops
• Load lifting applications

STANDARD FEATURES:
• Internal urethane bumpers
• Composite bearings
• Standard internal piston magnet for switch sensing
• Lightweight aluminum design

OPTIONS:
• Stop collars and bumpers
• Dual tooling plate option
• Reed or solid state position sensors

SPECIFICATIONS:

BENDING MOMENTS DIAGRAM

Reference for all comparison graphs

Graphs are general performance comparisons between cylinders of similar (1" bore) sizes with 12" stroke (PB2 6" stroke). Maximum force is based on air pressure of 100 PSI (PB2 rated up to 150 PSI). See www.tolomatic.com for complete performance information.
POWER TRANSMISSION

GEARBOXES

SLIDE-RITE® GEARBOX

STANDARD FEATURES:
• Designed to slide along the shaft, limited only by the length of the keyway
• One-piece housing, one-piece geared sleeve and sealed bearings eliminate leakage
• Shaft speeds up to 1200 RPM
• Backlash < 1°
• Prelubricated and ready for installation
• Bore sizes: Compact; .5” & .625” 12 & 15mm
  Standard; .75”, 1” & 1.25” 20, 25 & 30mm

OPTIONS:
• Corrosion resistant (CR) option
  - Electroless nickel-plated geared sleeves, keys and retaining rings
  - Stainless-steel bearings
  - Clear anodized aluminum case
• 3:2, 2:1 gear ratios

SPECIFICATIONS*

<table>
<thead>
<tr>
<th>SERIES</th>
<th>RATIO</th>
<th>NO. OF MODELS</th>
<th>ENVELOPE SIZE (in.)</th>
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<td>12</td>
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<td>6</td>
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<tr>
<td>Standard</td>
<td>1:1</td>
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<td>Standard-CR</td>
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<td>3.8 x 5.9 x 3.8</td>
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</table>

TORQUE AND EFFICIENCY vs RPM AT MAXIMUM OPERATING TEMPERATURE (1:1 RATIO)*

*NUMBERS ARE FOR GENERAL COMPARISONS ONLY. Not all models deliver maximum values listed. See catalog or contact Tolomatic for complete specifications.
**CALIPER DISC BRAKES**

**PNEUMATIC**

**STANDARD FEATURES:**
- Double acting or single acting
- Replaceable, high-grade friction material
- Aluminum construction with zinc plated bolts, Buna-N seals

**OPTIONS:**
- EPR seals, Viton® seals
- Retractable pistons, floating bracket

**SPECIFICATIONS**

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<th>NO. OF MODELS</th>
<th>FRICTION MATERIAL (cu. in.)</th>
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**PERFORMANCE OVERVIEW**

**DYNAMIC TORQUE (MAX. in.-lbs.)**

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<tbody>
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**STATIC TORQUE (MAX. in.-lbs.)**

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<th>P10</th>
<th>P20</th>
<th>P220</th>
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<tbody>
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<td>12</td>
<td>213</td>
<td>369</td>
<td>732</td>
</tr>
<tr>
<td>16</td>
<td>293</td>
<td>513</td>
<td>1,038</td>
</tr>
</tbody>
</table>

**HYDRAULIC**

**STANDARD FEATURES:**
- Double acting or single acting
- Replaceable, high-grade friction material
- Aluminum or cast iron construction with zinc plated bolts, bleeder screws, Buna-N seals

**OPTIONS:**
- EPR seals, Viton® seals
- Retractable pistons, floating bracket

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>NO. OF MODELS</th>
<th>FRICTION MATERIAL (cu. in.)</th>
<th>TOTAL LINING AREA (sq. in.)</th>
<th>PISTON DIA. (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H10</td>
<td>14</td>
<td>0.46</td>
<td>2.00</td>
</tr>
<tr>
<td>H20</td>
<td>23</td>
<td>0.83</td>
<td>4.00</td>
</tr>
<tr>
<td>H220</td>
<td>52</td>
<td>1.66</td>
<td>8.00</td>
</tr>
<tr>
<td>H441</td>
<td>4</td>
<td>3.71</td>
<td>9.14</td>
</tr>
<tr>
<td>H660</td>
<td>6</td>
<td>8.00</td>
<td>32.0</td>
</tr>
</tbody>
</table>

**PERFORMANCE OVERVIEW**

**DYNAMIC TORQUE (MAX. in.-lbs.)**

<table>
<thead>
<tr>
<th>DISC DIA. (in.)</th>
<th>H10</th>
<th>H20</th>
<th>H220</th>
<th>H441</th>
<th>H660</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.313</td>
<td>1,737</td>
<td>3,285</td>
<td>10,282</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>8</td>
<td>2,328</td>
<td>4,500</td>
<td>13,608</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>10</td>
<td>3,028</td>
<td>5,940</td>
<td>17,755</td>
<td>19,539</td>
<td>—</td>
</tr>
<tr>
<td>12</td>
<td>3,728</td>
<td>7,380</td>
<td>21,946</td>
<td>24,834</td>
<td>45,672</td>
</tr>
<tr>
<td>16</td>
<td>5,128</td>
<td>10,260</td>
<td>31,147</td>
<td>35,424</td>
<td>66,432</td>
</tr>
</tbody>
</table>

**STATIC TORQUE (MAX. in.-lbs.)**

<table>
<thead>
<tr>
<th>DISC DIA. (in.)</th>
<th>H10</th>
<th>H20</th>
<th>H220</th>
<th>H441</th>
<th>H660</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.313</td>
<td>993</td>
<td>1,642</td>
<td>5,141</td>
<td>—</td>
<td>—</td>
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<tr>
<td>8</td>
<td>1,330</td>
<td>2,250</td>
<td>6,804</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>10</td>
<td>1,730</td>
<td>2,970</td>
<td>8,878</td>
<td>11,679</td>
<td>—</td>
</tr>
<tr>
<td>12</td>
<td>2,130</td>
<td>3,690</td>
<td>10,973</td>
<td>14,844</td>
<td>26,664</td>
</tr>
<tr>
<td>16</td>
<td>2,930</td>
<td>5,130</td>
<td>15,574</td>
<td>21,174</td>
<td>38,784</td>
</tr>
</tbody>
</table>

**MECHANICAL**

**STANDARD FEATURES:**
- Single acting
- Replaceable, high-grade friction material
- Aluminum or cast iron construction with zinc plated bolts

**OPTIONS:**
- Choose from 2 different lever lever lengths (available on some models)

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>NO. OF MODELS</th>
<th>FRICTION MATERIAL (cu. in.)</th>
<th>TOTAL LINING AREA (sq. in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME10</td>
<td>8</td>
<td>0.46</td>
</tr>
<tr>
<td>ME20</td>
<td>12</td>
<td>0.83</td>
</tr>
<tr>
<td>ME220</td>
<td>15</td>
<td>1.66</td>
</tr>
<tr>
<td>MB3</td>
<td>1</td>
<td>6.06</td>
</tr>
</tbody>
</table>

**PERFORMANCE OVERVIEW**

**DYNAMIC TORQUE (MAX. in.-lbs.)**

<table>
<thead>
<tr>
<th>DISC DIA. (in.)</th>
<th>ME10</th>
<th>ME20</th>
<th>ME220</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.313</td>
<td>3,004</td>
<td>3,782</td>
<td>15,488</td>
</tr>
<tr>
<td>8</td>
<td>4,024</td>
<td>4,994</td>
<td>20,208</td>
</tr>
<tr>
<td>10</td>
<td>5,236</td>
<td>5,994</td>
<td>24,978</td>
</tr>
<tr>
<td>12</td>
<td>6,446</td>
<td>7,380</td>
<td>29,746</td>
</tr>
<tr>
<td>16</td>
<td>8,866</td>
<td>9,312</td>
<td>36,572</td>
</tr>
</tbody>
</table>

**STATIC TORQUE (MAX. in.-lbs.)**

<table>
<thead>
<tr>
<th>DISC DIA. (in.)</th>
<th>ME10</th>
<th>ME20</th>
<th>ME220</th>
<th>MB3</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.313</td>
<td>1,502</td>
<td>1,891</td>
<td>5,851</td>
<td>—</td>
</tr>
<tr>
<td>8</td>
<td>2,012</td>
<td>2,497</td>
<td>10,104</td>
<td>19,893</td>
</tr>
<tr>
<td>10</td>
<td>2,618</td>
<td>2,970</td>
<td>12,489</td>
<td>24,506</td>
</tr>
<tr>
<td>12</td>
<td>3,223</td>
<td>3,102</td>
<td>16,289</td>
<td>33,733</td>
</tr>
</tbody>
</table>

*NUMBERS ARE FOR GENERAL COMPARISONS ONLY. Not all models deliver maximum values.*

---

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[14] [1-800-328-2174]
TRANSMISSION
(CONTINUED)

BRAKES

SPRING APPLIED/HYDRAULIC RELEASE

STANDARD FEATURES:
- Braking is applied when hydraulic pressure is released
- Single acting with Belleville® spring washers
- Replaceable, high-grade friction material
- Aluminum or cast iron construction with zinc plated bolts, Buna-N seals

OPTIONS:
- EPR seals
- Manual lining wear compensators

SPECIFICATIONS*

<table>
<thead>
<tr>
<th>NO. OF MODELS</th>
<th>FRICTION MATERIAL (cu. in.)</th>
<th>TOTAL LINING AREA (sq. in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS20</td>
<td>6</td>
<td>0.83</td>
</tr>
<tr>
<td>FS220</td>
<td>24</td>
<td>1.66</td>
</tr>
<tr>
<td>FS595</td>
<td>8</td>
<td>4.57</td>
</tr>
<tr>
<td>TOTAL</td>
<td>12</td>
<td>9.14</td>
</tr>
</tbody>
</table>

PERFORMANCE OVERVIEW*

STATIC TORQUE (MAX. in.-lbs.)

<table>
<thead>
<tr>
<th>DISC DIA. (in.)</th>
<th>FS20</th>
<th>FS220</th>
<th>FS220C</th>
<th>FS595</th>
<th>FS595 DUAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.313</td>
<td>1,061</td>
<td>2,213</td>
<td>4,522</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>8</td>
<td>1,453</td>
<td>2,930</td>
<td>5,985</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>10</td>
<td>1,918</td>
<td>3,822</td>
<td>7,809</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>12</td>
<td>2,383</td>
<td>4,724</td>
<td>9,652</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>16</td>
<td>3,313</td>
<td>6,705</td>
<td>13,699</td>
<td>31,046</td>
<td>62,093</td>
</tr>
</tbody>
</table>

DISCS

STANDARD FEATURES:
- Carbon 1010 steel, flatness within 0.010"
- Stress relieved, blanchard ground to an 80 (RMS) microinch finish
- Socket head cap screw fasteners, keyway set screws

MODELS

<table>
<thead>
<tr>
<th>NO. OF MODELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUB &amp; DISC ASSEMBLY</td>
</tr>
<tr>
<td>HUB &amp; DISC ASSEMBLY w/ QUICK DISCONNECT BUSHINGS</td>
</tr>
<tr>
<td>QUICK DISCONNECT BUSHINGS</td>
</tr>
<tr>
<td>ONE-PIECE HUB &amp; DISC</td>
</tr>
<tr>
<td>BLANK DISC</td>
</tr>
<tr>
<td>DISC w/ BOLT CIRCLES &amp; PILOT HOLE</td>
</tr>
</tbody>
</table>

INTENSIFIER

INPUT:
- Pneumatic pressure max.: 100 PSI
- Piston seal: U-cup design
- Cylinder material: Hard coated aluminum
- Input to output ratio: 1:10

OUTPUT:
- Hydraulic pressure max.: 1,000 PSI
- Hydraulic fluid displacement: 0.44 cu. in.
- Cylinder seal: O-ring, Buna-N, opt. EPR
- Cylinder material: Aluminum
- 1/8 NPT Port: Standard

PLANETARY ROLLER SCREW SPECIFICATIONS:

<table>
<thead>
<tr>
<th>CONFIGURATION</th>
<th>SCREW SIZE</th>
<th>LEAD</th>
<th>MAX. STROKE</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.04</td>
<td>15</td>
<td>4</td>
<td>699.0</td>
</tr>
<tr>
<td>15.05</td>
<td>15</td>
<td>5</td>
<td>699.0</td>
</tr>
<tr>
<td>15.10</td>
<td>15</td>
<td>10</td>
<td>699.0</td>
</tr>
<tr>
<td>20.04</td>
<td>20</td>
<td>4</td>
<td>1036.2</td>
</tr>
<tr>
<td>20.05</td>
<td>20</td>
<td>5</td>
<td>1036.2</td>
</tr>
<tr>
<td>20.10</td>
<td>20</td>
<td>10</td>
<td>1036.2</td>
</tr>
<tr>
<td>30.05</td>
<td>30</td>
<td>5</td>
<td>980.2</td>
</tr>
<tr>
<td>30.10</td>
<td>30</td>
<td>10</td>
<td>980.2</td>
</tr>
<tr>
<td>36.05</td>
<td>36</td>
<td>5</td>
<td>954.5</td>
</tr>
<tr>
<td>36.10</td>
<td>36</td>
<td>10</td>
<td>954.5</td>
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<td>39.10</td>
<td>39</td>
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<td>911.5</td>
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<td>48</td>
<td>12</td>
<td>830.7</td>
</tr>
<tr>
<td>63.12</td>
<td>63</td>
<td>12</td>
<td>737.0</td>
</tr>
</tbody>
</table>

Lead Accuracy: 0.01 mm/300 mm  Backlash: 0.03 mm

*Max Force is guidance for achieving maximum life. Consult Tolomatic for higher force

values listed. See catalog or contact Tolomatic for complete specifications.

www.tolomatic.com

Tolomatic Excellence in Motion

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Long Lasting, Precision Roller Screw Electric Actuators

- Integrated Servo Motor
- High Performance
- Compact Rugged Design

- Pneumatic & Hydraulic Replacement
- Your Motor Here® Flexible Motor Mounting

- Integrated Servo Motor
- Resistance Spot Welding
- Robot Integration & Motor Files

- Extreme Force
- Hydraulic Replacement

- Hygienic, Stainless Steel, IP69K
- Ideal for Food & Beverage, Processing Applications

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help@tolomatic.eu

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