

# PNEUMATIC ACTUATORS

THE RODLESS CYLINDER LEADER

### WHAT YOU EXPECT FROM THE RODLESS LEADER



Tolomatic offers a complete line of linear motion products. We offer more rodless cylinder styles than any other company. Guided rod style actuators compliment our broad line of rodless pneumatic products.

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### INNOVATIVE RODLESS PRODUCTS

Tolomatic created the rodless cylinder industry when we manufactured the original cable cylinder. For over 50 years, Tolomatic has been recognized as the rodless cylinder market leader. We earn that distinction daily by satisfying customers like you.

### •ENDURANCE TECHNOLOGY®

Every Tolomatic pneumatic product is designed and built with Endurance Technology<sup>SM</sup>. Material selection, from seals to finish, and every other design element is optimized for long life and excellent performance. The result is the best value and best performing pneumatic product in the market today. As one customer told us, "Your cylinders are built like a tank and run like a deer." Thank you!

### TRUST YOUR APPLICATION TO THE RODLESS LEADER

When you want the job done right, go with the experts. Long life. Durability. Ruggedness. Built to your specifications in 5 days or less. Only one company specializes in rodless technology. Tolomatic. The rodless leader.

Be sure to visit www.tolomatic.com for up-to-date product specifications, free sizing and selection software, and 3D CAD solid files.



### THE RODLESS ADVANTAGE

### TOLOMATIC RODLESS BAND CYLINDERS GET THE JOB DONE IN LESS SPACE THAN ROD STYLE CYLINDERS

<u>ج</u>	Space Required for Rod Cylinder & Load
	LOAD LOAD
Band Cylinder Space Savings	Space Required for Band Cylinder & Load

**Consider this:** A rodless band cylinder contains its stroke within the cylinder itself. A 2" bore cylinder with a 24" stroke can provide a 43% space savings when compared to an equivalently sized rod cylinder. In addition, the load is supported throughout the entire stroke so there is minimal load deflection when compared to rod style cylinders.

With a Tolomatic Band Cylinder, there is no concern about rod rotation. Also, because rodless cylinders have equal piston areas in both directions, the cylinder experiences zero load variation in either direction.

### GO RODLESS AND SAVE SPACE!

### **ROD STYLE vs RODLESS FEATURE COMPARISON**

Feature	Tolomatic Rodless	Rod Style
Integrated Load Support	<b>v</b>	—
Space Saving Design	<b>v</b>	_
Piston Seals Isolated from Load	<b>v</b>	—
Internal Air Cushioning	<b>v</b>	$\checkmark$

### **APPLICATIONS**









With over 50 years of application proven experience, Tolomatic pneumatic products are key components in the following industries and applications:

### INDUSTRY INSTALLATIONS

- Packaging
- Automotive
- Food and Beverage
- Material Handling & Conveying
- •Plastic Injection Molding
- •Metal Processing
- •Paper and Textiles
- Medical
- •Electronics
- Printing
- •and More ...

### **APPLICATIONS**

- Material Handling
- •Part Transfer
- Part Advancement
- •Part Sorting
- Cutting
- Elevators
- Palletizing
- Door Closure
- Conveyors
- Robotics
- •Machine Tools
- General Automation
- •and More ...

### www.tolomatic.com

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# MXP-N INTERNAL BEARING BAND CYLINDER

#### •STAINLESS STEEL BANDS



•Does not stretch like bands made of rubber or polymer materials

•Stainless steel sealing bands resist blow out during pressure spikes that may occur during high velocity cushioning

#### ● RETAINED ← DUST BAND

 Retained dust band keeps contaminants from entering the cylinder interior, protecting components for reduced maintenance and increased uptime

### ──**>INTERNAL BEARINGS**●

• Design maximizes piston bearing surface



area for less pressure on bearing surfaces, less pressure results in less wear

- Permanent lubrication for low friction and extended bearing life
- •Internal location provides protection from external contaminants, extending life

DIRECT MOUNT

Head bolts are tapped

for direct mounting

### **PORTING CHOICES**

- •4-ported heads are standard to allow air connections on sides, end or bottom
- •Single-end porting allows convenient one end air connection
- •NPT, Metric Parallel (ISO-G/BSP) & Metric Taper (Rc/BST) available on both metric and inch (US standard) mount actuators

### •POSITIVE POSITION SEALS

•Sturdy U-cup base section assures positive positioning of seal lip for better sealing and less wear



•Made of custom formulated polyurethane for pliable, wear resistant seal lip

### INCH OR METRIC MOUNTING

• Your choice of inch (US standard) or metric fasteners for carrier and head bolt mounting



2.50" 2.00" 1.25" 1.25" 1.00" 0.625"

MAXIMUM STROKE: 206" THRUST: 491 lbf LOAD: 740 lb

#### COMPLETE INFORMATION: www.tolomatic.com

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# **Tolomatic**... MAXIMUM DURABILITY

DUST BAND

SEALING

BAND

### NON-WEAR BAND RETENTION•

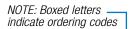
- •Magnetically retained bands are not subject to wear as are mechanically retained systems
- Immediate band engagement and release MAGNET results in less drag on piston for lower breakaway force during initial carrier movement

### >DUST WIPER●

 Formed end cap and side dust wipers keep contaminants from entering the cylinder's internal area



- •Easy screw adjustment for smooth deceleration protecting actuator from high stress at end-of-stroke
- •Adjustable cushions with retained stainless steel needle screw for increased safety



### **OPTIONS**

### 

- 2X higher Fz (load) capacity
- · High bending moment capacity

### FLOATING MOUNT FIL

• Compensates for non-parallelism between MXP band cylinder and externally guided load

### TUBE CLAMPS TC

- Used for intermediate support
- Flush with bottom of actuator to retain low profile
- Drop-in, adjustable mounting locations

### FOOT MOUNTS FM

- For end mounting of MXP band cylinder
- Use to bottom or side mount actuator

## SHOCK ABSORBERS AL SL

- Allows increased operating speed and load
- Self-compensates for load or speed changes
- · Minimizes impact load to equipment
- Fixed or adjustable position shocks

### SINGLE-END PORTING |S|

 Convenient single-end air connection (not available on MXP16)

### SWITCHES

- Wide variety of sensing choices: Reed, Solid State PNP or NPN, all available normally open or normally closed
- Flush mount, drop-in installation, anytime
- Bright LEDs, power & signal indication
- CE rated, RoHS compliant

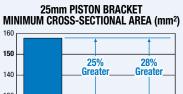


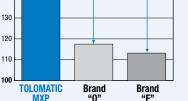
 Standard feature that allows sensor installation on left, right or bottom of the extrusion

#### ○ | ] ] ] STRENGTH

- Single piece extrusion for piston bracket and carrier reduces failure points
- Piston bracket neck cross-sectional area is up to 28% greater than competitive designs, providing increased durability











### Tolomatic

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## **MXP-S** solid bearing **BAND CYLINDER** Endurance Technology features are designed for maximum durability to

provide extended service life.

### **•STAINLESS STEEL** Both interior sealing band

and exterior dust band made of fatigue resistant stainless steel STAINLESS STEEL IS DURABLE, FLEXIBLE AND CORROSION RESISTANT

- Does not stretch like bands made of rubber or polymer materials
- •Stainless steel sealing bands resist blow out during pressure spikes that may occur during high velocity cushioning

#### • RETAINED DUST RANDO

•Retained dust band keeps contaminants from entering the cylinder interior, protecting components for reduced maintenance and increased uptime

### **OSITIVE POSITION SEALS**

•Sturdy U-cup base section assures positive positioning of seal lip for better sealing and less seal wear

 Made of custom formulated polyurethane for pliable, wear resistant seal lip



 Standard feature that allows sensor installation on left, right or bottom of the extrusion

### MXP-S SPECIFICATIONS: pg. 20 BORE SIZES



MAXIMUM STROKE: 206" THRUST: 491 lbf LOAD: 1,040 lb

#### COMPLETE **INFORMATION:** www.tolomatic.com

### **DIRECT MOUNT** •

 Head bolts are tapped for direct mounting

### INCH OR METRIC MOUNTING

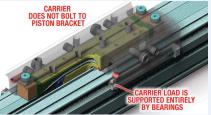
•Your choice of inch (US standard) or metric fasteners for carrier and head bolt mounting

### • PORTING CHOICES •

- •4-ported heads are standard to allow air connections on sides, end or bottom
- •Single-end porting allows convenient one end air connection
- •NPT. Metric Parallel (ISO-G/BSP) & Metric Taper (Rc/BST) available on both metric and inch (US standard) mount actuators

### oISOLATED PISTON⊌

•Unique design isolates the piston from the applied load, extending the service life of the piston seals



- Piston remains isolated even when the carrier is deflected under load
- Piston bracket and carrier feature single piece extrusions, reducing failure points

### Tolomatic

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### ⊘NON-WEAR BAND RETENTION⊙

•Magnetically retained bands are not subject to wear as are mechanically retained systems

•Immediate band engagement and release MAGNET results in less drag on piston for lower breakaway force during initial carrier movement

### DUST WIPER

•Formed end cap and side dust wipers keep contaminants from entering the cylinder's internal area

### CUSHINNSO

- •Easy screw adjustment for smooth deceleration protecting actuator from high stress at end-of-stroke
- Adjustable cushions with retained stainless steel needle screw for increased safety

NOTE: Boxed letters indicate ordering codes

### LARGE FLEXIBLE **MOUNTING PATTERN**

- Carrier gives more load stability Compatibility with existing BC2 applications
- •More fastening options

### ION-BINDING

•Bearings are tensioned indirectly, providing bind free adjustment

### ⊙TRAPEZOIDAL BEARINGS⊙

- •Trapezoidal design maximizes bearing surface area for less pressure on bearing surfaces; less pressure results in less wear
- •Engineered bearing material has low static and dynamic friction with low wear properties for long lasting, smooth operation
- •Bearings are field replaceable for extended service life





### **OPTIONS**

### 

• 2X higher Fz (load) capacity

DUST BAND

SEALING BAND

· High bending moment capacity

### FLOATING MOUNT F

• Compensates for non-parallelism between MXP band cylinder and externally guided load

### TUBE CLAMPS TC

- Used for intermediate support
- Flush with bottom of actuator to retain low profile
- Drop-in, adjustable mounting locations

### FOOT MOUNTS FM

- For end mounting of MXP band cylinder
- Use to bottom or side mount actuator

### SHOCK ABSORBERS AL SL AIH SIH

- Allows increased operating speed and load
- Self-compensates for load or speed changes
- Minimizes impact load to equipment
- Fixed or adjustable position shocks

### SINGLE-END PORTING S

Convenient single-end air connection (not available on MXP16)

### SWITCHES

- Wide variety of sensing choices: Reed, Solid State PNP or NPN, all available normally open or normally closed
- Flush mount, drop-in installation, anytime
- Bright LEDs, power & signal indication
- CE rated, RoHS compliant

www.tolomatic.com

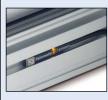
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# **MXP-P** PROFILED RAIL BAND CYLINDER

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

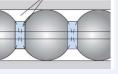
### **•RECIRCULATING BALL BEARING**

- Recirculating ball bearings are used to reduce friction and extend actuator life
- Designed with a grease pocket between ball elements to reduce friction, noise and maintenance
- •Large permissible moment loads
- •High speed operation, low heat generation
- •High precision, smooth, low friction motion



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#### INTERNAL MAGNETS

•Standard

feature that

allows sensor

installation on

the open side

or bottom of

the extrusion

### •INCH OR METRIC MOUNTING•

•Your choice of inch (US standard) or metric fasteners for carrier and head bolt mounting





COLUMN I

positioning of seal lip for better sealing and less seal wear

•Made of custom formulated polyurethane for pliable, wear resistant seal lip



## DIRECT

 Head bolts are tapped for direct mounting

### **PORTING CHOICES** •

- •4-ported heads are standard to allow air connections on side, top, end or bottom
- Single-end porting allows convenient one end air connection
- •NPT, Metric Parallel (ISO-G/BSP) & Metric Taper (Rc/BST) available on both metric and inch (US standard) mount actuators

### STAINLESS STEEL BANDSO



- •Does not stretch like bands made of rubber or polymer materials
- •Stainless steel sealing bands resist blow out during pressure spikes that may occur during high velocity cushioning

### 

### 1.800.328.2174

MXP-P

SPECIFICATIONS: pg. 20

BORE SIZES

MAXIMUM

STROKE: 206"

THRUST: 491 lbf

LOAD: 2,583 lb

COMPLETE

INFORMATION: www.tolomatic.com

-2.50" -2.00"

-1.50" -1.25" -1.00"

-0.625

# **Tolomatic...MAXIMUM DURABILITY**

### LOW CARRIER HEIGHT

- Reduces overall cylinder envelope
- Large mounting pattern for high load stability

### ARIF CUSH

- Easy screw adjustment for smooth deceleration protecting actuator from high stress at end-of-stroke
- Adjustable cushions with retained stainless steel needle screw for increased safety

### 

- Magnetically retained bands are not subject to wear as are mechanically retained systems
- MAGNET Immediate band engagement and release results in less drag on piston for lower breakaway force during initial carrier movement

NOTE: Boxed letters indicate ordering codes

2X higher Fz (load) capacity

High bending moment capacity

TUBE CLAMPS T

 Used for intermediate support • Flush with bottom of actuator to retain low profile

FOOT MOUNTS FM

• Drop-in, adjustable mounting locations

• For end mounting of MXP band cylinder Use to bottom or side mount actuator

• Minimizes impact load to equipment • Fixed or adjustable position shocks SINGLE-END PORTING S Convenient single-end air connection

DUST BAND

SEALING

BAND

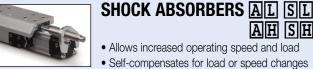
### **OPTIONS**















- (not available on MXP16) SWITCHES • Wide variety of sensing choices: Reed, Solid
- State PNP or NPN, all available normally open or normally closed
- Flush mount, drop-in installation, anytime
- Bright LEDs, power & signal indication
- CE rated, RoHS compliant

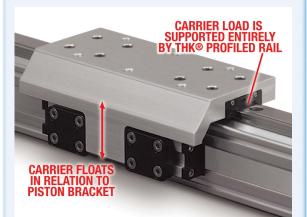
 Retained dust band keeps contaminants from entering the cylinder interior, protecting components for reduced maintenance and increased uptime

#### **DILST /IPFRo**

•Formed end cap and side dust wipers keep contaminants from entering the cylinder's internal area

### SOLATED PISTON

•Unique design isolates the piston from the applied load, extending the service life of the piston seals



- Piston remains isolated even when the carrier is deflected under load
- Piston bracket and carrier feature single piece extrusions. reducing failure points

### www.tolomatic.com

### Tolomatic

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# **BC3 BAND CYLINDER**

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

### FORMED END CAP\_\_\_\_\_ WIPER SEAL

- •Keeps contaminants from entering the sealing area
- •Protects internal components
- •Reduces maintenance while increasing productivity

### SEALED BALL BEARING SYSTEM○

- •All bearing components covered by seal strip
- •Bearing components are sealed and lubricated at the factory
- •Assures maximum resistance to contamination

### FORMED STEEL PISTON BRACKETO

- Provides maximum strength at major stress points
- •Heat treated carbon steel withstands the toughest dynamic forces
- •Strongest bracket design in the industry assures long life with less maintenance





• BC3 SPECIFICATIONS: pg. 21 BORE SIZES 2.00"

-1 00"

MAXIMUM STROKE: 206" THRUST: 310 lbf

LOAD: 8,032 lb COMPLETE INFORMATION: www.tolomatic.com



- Fatigue resistant stainless steel bands are specifically made to provide longer life and will not elongate, like elastomers
- •Outer band keeps out contaminants for extended performance
- •Inner band provides a smooth surface for less seal wear

### **Tolomatic**

# **TOLOMATIC...THE RODLESS CYLINDER LEADER**

### →LOAD-BEARING CARRIER DESIGN●

- •Load and piston are independent piston floats, resulting in less friction and longer seal life
- •Recirculating ball bearing system guides and supports load for consistent long term performance
- Constant level of friction is maintained even when load orientation changes

### → ADJUSTABLE CUSHIONS

- •Adjustable cushions are standard
- •Easy screw adjustment for end-of-stroke deceleration
- •Protects actuator and load from damage

NOTE: Boxed letters \_\_\_\_\_\_ indicate ordering codes

AUXILIARY CARRIER DW

### **OPTIONS**





## High bending moment capacity

### TUBE SUPPORT MOUNTS TS

• Used for intermediate support • Flush with bottom of actuator

2X higher load capacity
High bending moment capacity
DUAL 180° CARRIER D

Higher Fz load capacity

to retain low profile

### • Drop-in, adjustable mounting locations

### FOOT MOUNTS FM

• For end mounting of BC3 band cylinder

### SHOCK ABSORBERS AL AH

- Allows increased operating speed and load
- Self-compensates for load or speed changes
- Minimizes impact load to equipment
- Adjustable position shocks

### **SWITCHES**

- Available in Reed, Hall-effect and Triac
- 15ft. cable with flying leads; available with quick-disconnect couplers

### **ABSOLUTE POSITION FEEDBACK**

• Linear displacement transducer, embedded within the actuator, is used to determine the carrier position with high accuracy

### →PATENTED WEDGE BEARING SYSTEM●

- Bearing surfaces adjusted at the factory for optimum pre-load
- Bearing surfaces adjusted by and supported by a steel wedge assuring long term stability





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### **BC2 BAND CYLINDER** • ENDURANCE TECHNOL

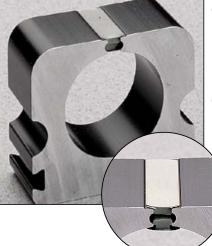
Endurance Technology features are designed for maximum durability to provide extended service life.

#### • FORMED STEEL PISTON RRACKFT

- Provides maximum strength at major stress points
- •Heat treated carbon steel withstands the toughest dynamic forces
- •Strongest bracket design in the industry assures long life with less maintenance



#### **STAINLESS STEEL SEALING SYSTEM**<sup>•</sup>



• Fatigue resistant stainless steel bands are specifically made to provide longer life and will not elongate, like elastomers

- •Outer band keeps out contaminants for extended performance
  - Inner band provides a smooth surface for less seal wear

### BC2

- SPECIFICATIONS: pg. 21 BORE SIZES -2 50" 2.00" -1.50" -1.25" -1.00"
- 0.50 MAXIMUM



#### COMPLETE **INFORMATION:** www.tolomatic.com

- Adjustable cushions are standard, not optional
- •Easy screw adjustment for end-of-stroke deceleration
- Protects actuator and load from damage

#### FORMED END CAP PER

- Keeps contaminants from entering the sealing area
- Protects internal components
- Reduces maintenance while increasing productivity

**Tolomatic** 

# **TOLOMATIC...THE RODLESS CYLINDER LEADER**



- •Standard feature
- Simplifies air connections

- •Stronger, stiffer tube retains tolerance specs when chamber is pressurized
- •Keeps sealing band in place for maximized air efficiency
- •Tube supports are minimized
- •Solid structural support provides durability and long life performance

### **OPTIONS**

### **AUXILIARY CARRIER**

- Substantially higher load capacity
- Substantially higher bending moment capacity

### FLOATING MOUNT

- Compensates for non-parallelism between band cylinder and externally guided load

### FOOT MOUNTS

• For end mounting of band cylinder

### SHOCK ABSORBERS

- Smooth deceleration
- Allows increased operating speed
- Self-compensates for load or speed changes
- Minimizes impact load to equipment
- Higher equipment productivity
  - Adjustable position shocks available

### SWITCHES

- Available in Reed, Hall-effect and Triac
- 15ft. cable with flying leads; available with quick-disconnect couplers

#### CARRIER **BRACKET**<sup>•</sup> STARI F



#### •2-bolt adjustment instead of a series of set screws

- Easy to set tension for freer running or stiffer systems
- Minimizes free play while maintaining a higher level of load quidance

#### **DESIGN** • CARRIER NAN-RFARING

- Load and piston are independent - piston floats, resulting in less friction and longer seal life
- •Engineered resin load bearings offer consistently low friction and long wear









### www.tolomatic.com

### 13

# **TUBE SUPPORT MOUNTS**

### • Used for intermediate support











# **MAG COUPLED CYLINDER** • ENDURANCE TECHNOLOGY<sup>M</sup> Endurance Technology features are designed for maximum durability to provide extended service life.

BEARING CHOICE

•Precision linear ball bearing or

• Sintered bronze

### MGS MAG SLIDE

### • FIELD REPAIRABLE DESIGN • •Unique in the industry

• Durable and reliable

# No leak construction

•Durable, long lasting material

MG MAG CYLINDER

• MGS	• MG
SPECIFICATIONS: pg. 21	SPECIFICATIONS: pg. 21
BORE SIZES	BORE SIZES
1.00" 0.625" 0.375"	1.00" 0.625" 0.375" 0.25"
MAXIMUM	MAXIMUM
STROKE: 80"	STROKE: 56"
THRUST: 72 lbf	THRUST: 72 lbf
LOAD: 90 lb	LOAD: NA
COMPLETE IN	FORMATION:

www.tolomatic.com

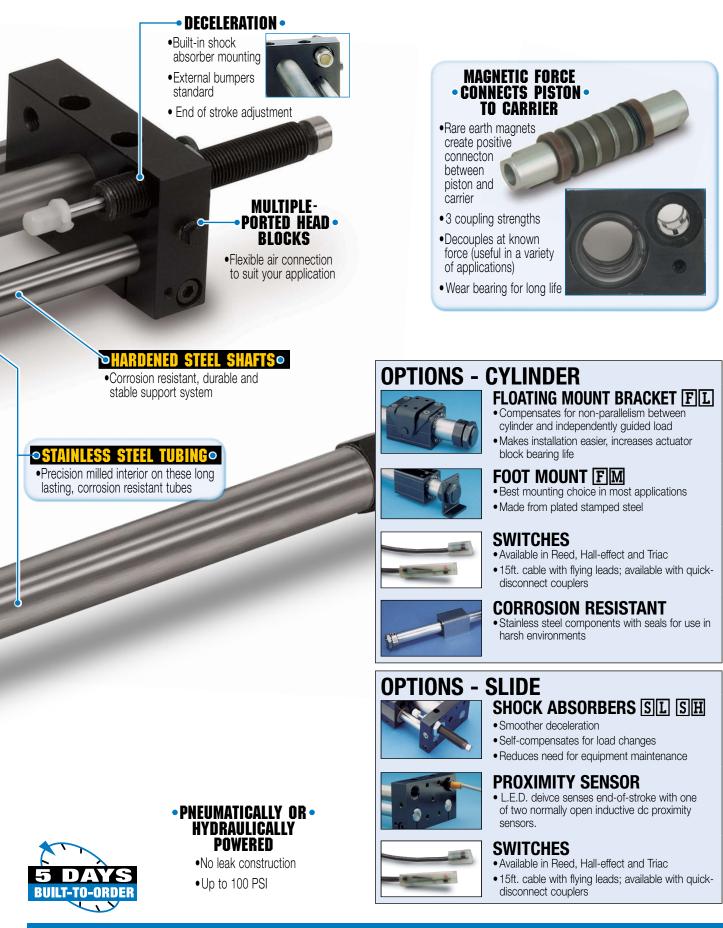
**Tolomatic** 

oANODIZED ALUMINUMo

•Durable and corrosion resistant •Precision milled

EADSO ≫ANODIZED ALUMINUM •Durable and corrosion resistant

# **TOLOMATIC...THE RODLESS CYLINDER LEADER**

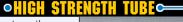


### www.tolomatic.com

### Tolomatic

# **CABLE CYLINDER** • ENDURANCE TECHNOLOGY

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



- High-strength, lightweight 6063-T832 black anodized aluminum or steel
- Creates chamber for pneumatic or hydraulic pressure and protects piston



- •High strength material resists deformation
- •Cable adjustment points
- •Threaded holes for load attachment

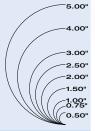
CC DOUBLE Acting Cable Cylinder

PORTING CHOICES

•Choose from 2 or 3 port heads

#### • CC SPECIFICATIONS: pg. 22 BORE SIZES

P.



MAXIMUM STROKE: 280" THRUST: 1,919 lbf LOAD: NA COMPLETE INFORMATION:

www.tolomatic.com



•High-strength, lightweight anodized aluminum

 Protects piston and creates chamber for pneumatic or hydraulic pressure

### • LOCATE REMOTELY •

•Cylinder can be located away from work area. Useful in harsh environments and if space/weight are limited

### **ALUMINUM PISTON**

- High-strength, lightweight aluminum
- Pulls the cables when actuated by pneumatic or hydraulic pressure



### UNIQUE GLAND SEALSO

- •Tight seal for cables to pass through
- •Easy installation
- Snap In/Out cable seals or encapsulated gland seals depending on bore size



## **TOLOMATIC...THE RODLESS CYLINDER LEADER**



• Field proven to provide millions of cycles of uninterrupted service

•Nylon jacketed aircraft cables manufactured under Mil Spec. MiL-W-83420D

# SA SINGLE ACTING CABLE CYLINDER

(A)

- Use in vertical applications when double acting cable cylinder is not required
- •Can be positioned horizontally and achieve vertical movement

### **DP DOUBLE PURCHASE CABLE CYLINDER**

• Doubles the velocity and stroke capacity of cable cylinder without increasing space requirements

- •Stroke lengths up to 120 feet (36.6m)
- Isolates cylinder from harsh environments

### OPTIONS

### AUTO TENSIONER

STEEL TUBE

**3 PORTED HEAD** 

• For convenient air connection

- Maintains proper cable tension
- Maximizes service life of both cable and seals

### CALIPER DISC BRAKE HM HN

• For extra strength & use in harsh environments

SEALS OF VITON® MATERIAL V

- Best mounting choice in most applications







• Long lasting seal option • High temperature applications

disconnect couplers

EXTRA CABLE X A X B • To remotely locate cable cylinder



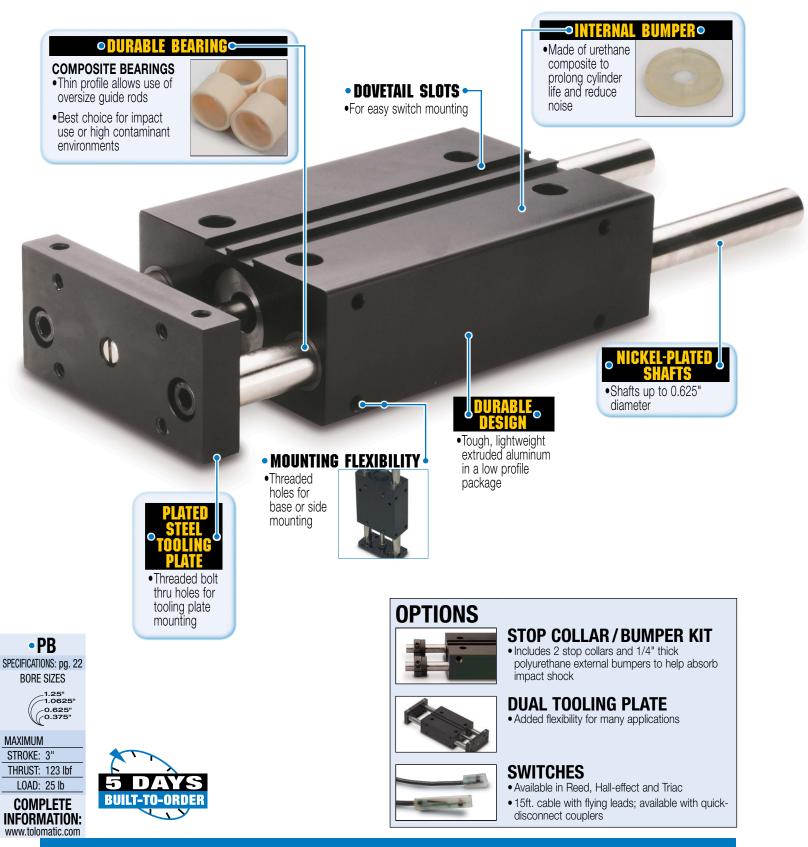


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### Tolomatic

# **PB POWER-BLOCK ENDURANCE TECHNOLOGY**

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



Tolomatic

# **PB2 POWER-BLOCK 2 • ENDURANCE TECHNOLOGY**

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



### **OPTIONS**



### **SWITCHES**

Available in Reed, Hall-effect and Triac

• 15ft. cable with flying leads; available with quickdisconnect couplers



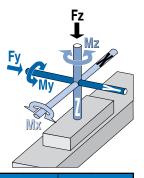


STROKE: 6" THRUST: 820 lbf

### www.tolomatic.com

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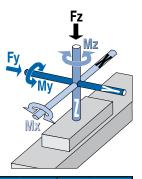
### **MOMENT & LOAD CAPACITY**



### **BAND CYLINDERS**

		ACTU			BE	NDING N	IOMENT	rs			LO	AD		MAX.		MAX.	
	BORE	BORES	SIZE	M	(	M	у	M	z	F	y	F	z	THR	UST	STRO	OKE
MODEL	SIZE	in	mm	in-lbs	N-m	in-lbs	N-m	in-lbs	N-m	lb	N	lb	N	lbf	Ν	in	тт
MXP-N	16	0.63	16	3	0.3	35	4.0	5	0.6	—	—	30	133	31	136	206	5,232
	25	1.00	25	9	1.0	132	14.9	27	3.1	—		65	289	79	349	206	5,232
Standard	32	1.25	32	36	4.1	318	35.9	120	13.6	—		115	512	123	546	205	5,207
Standard	40	1.50	38	55	6.2	575	65.0	156	17.6	—		195	867	177	786	203	5,156
	50	2.00	50	98	11.1	1,017	115.0	172	19.4	—		270	1,201	305	1,356	203	5,156
	63	2.50	64	120	13.6	1,776	201.0	216	24.4	—		370	1,646	491	2,184	103	2,616
	16-DW	0.63	16	3	0.3	150	16.9	81	9.1	_	_	60	267	31	136	201	5,105
	25-DW	1.00	25	9	1.0	390	44.1	143	16.2	—		130	578	79	349	200	5,080
Auxiliary Carrier	32-DW	1.25	32	36	4.1	805	91.0	302	34.1	—		230	1,023	123	546	198	5,029
	40-DW	1.50	38	55	6.2	1,658	187.0	413	46.7	—		390	1,735	177	786	194	4,940
-	50-DW	2.00	50	98	11.1	2,322	262.0	707	79.8	_	—	540	2,402	305	1,356	196	4,978
	63-DW	2.50	64	120	13.6	4,810	544.0	808	91.0	_	_	740	3,292	491	2,184	90	2,286
MXP-S	16	0.63	16	22	2.5	19	2.1	25	2.8	_	—	35	156	31	136	206	5,232
Line of	25	1.00	25	60	6.8	110	12.4	34	3.8	_	_	70	311	79	349	206	5,232
Chandend	32	1.25	32	100	11.3	350	39.5	140	15.8	_	_	150	667	123	546	205	5,207
Standard	40	1.50	38	275	31.1	600	67.8	220	24.9	_	_	225	1,001	177	786	203	5,156
-	50	2.00	50	315	35.6	1,155	131.0	341	38.5	_	_	315	1,401	305	1,356	203	5,156
-	63	2.50	64	585	66.1	2,340	264.0	520	58.8	_	_	520	2,313	491	2,184	103	2,616
and the second	16-DW	0.63	16	44	5.0	175	19.8	175	19.8	—	_	70	311	31	136	201	5,105
- Here	25-DW	1.00	25	120	13.6	420	47.5	420	47.5	_	—	140	623	79	349	200	5,080
Auxiliary Carrier	32-DW	1.25	32	200	22.6	1,050	119.0	1,050	119.0	_	_	300	1,335	123	546	198	5,029
	40-DW	1.50	38	550	62.1	1,913	216.0	1,913	216.0	_	_	450	2,002	177	786	194	4,940
	50-DW	2.00	50	630	71.2	2,709	306.0	2,709	306.0	_	_	630	2,802	305	1,356	196	4,978
	63-DW	2.50	64	1,170	132.0	6,760	764.0	6,760	764.0	_	_	1,040	4,626	491	2,184	90	2,286
MXP-P	16	0.63	16	39	4.4	339	38	339	38	217	965	217	965	31	136	206	5,232
anama la	25	1.00	25	126	14.2	502	57	377	43	449	1,997	449	1,997	79	349	206	5,232
Standard	32	1.25	32	226	25.5	1,344	152	1,344	152	569	2,531	569	2,531	123	546	205	5,207
Standard	40	1.50	38	600	67.8	1,913	216	1,913	216	736	3,274	736	3,274	177	786	203	5,156
	50	2.00	50	811	92.0	3,483	394	3,483	394	1,014	4,511	1,014	4,511	305	1,356	203	5,156
	63	2.50	64	1,019	115.0	5,339	603	5,339	603	1,292	5,747	1,292	5,747	491	2,184	103	2,616
1.	16-DW	0.63	16	79	8.9	620	70	620	70	434	1,931	434	1,931	31	136	201	5,105
	25-DW	1.00	25	252	28.5	1,613	182	1,613	182	898	3,995	898	3,995	79	349	200	5,080
Auxiliary Carrier	32-DW	1.25	32	457	51.6	2,202	249	2,202	249	1,138	5,062	1,138	5,062	123	546	198	5,029
-	40-DW	1.50	38	1,200	136.0	3,601	407	3,601	407	1,472	6,548	1,472	6,548	177	786	194	4,940
-	50-DW	2.00	50	1,623	183.0	4,966	561	4,966	561	2,028	9,021	2,028	9,021	305	1,356	196	4,978
-	63-DW	2.50	64	2,038	230.0	9,508	1,074	9,508	1,074	2,583	11,490	2,583	11,490	491	2,184	90	2,286
			J									,					

### **MOMENT & LOAD CAPACITY**



### **BAND CYLINDERS (CONT.)**

		ACTU	AL		B	NDING N	<b>IOMEN</b>	rs			LO	AD		MA	X.	MA	X.
	BORE	BORES	SIZE	M	ĸ	M	у	M	z	Fy	у	E	z	THR	UST	STRO	DKE
MODEL	SIZE	in	mm	in-lbs	N-m	in-lbs	N-m	in-lbs	N-m	lb	N	lb	N	lbf	N	in	mm
BC3	10	1.00	25	250	28.2	269	30	156	18	341	1,517	591	2,629	78	347	206	5,232
	15	1.50	40	859	97.0	1,033	117	596	67	840	3,737	1,454	<i>6,468</i>	176	783	202	5,130
Standard	20	2.00	50	1,662	188.0	1,472	166	850	<i>96</i>	1,159	5,156	2,008	8,932	310	1,379	142	3,606
	10-DW	1.00	25	500	56.5	2,825	319	1,630	184	682	3,034	1,182	5,258	78	347	201	5,105
	15-DW	1.50	40	1,718	194.0	11,734	1,326	6,779	766	1,680	7,473	2,908	12,936	176	783	194	4,927
Auxiliary Carrier	20-DW	2.00	50	3,324	376.0	16,265	1,838	9,388	1,061	2,318	10,311	4,016	17,864	310	1,379	134	3,403
BC3D	D10	1.00	25	657	74	312	35	538	61	1,182	5,258	682	3,034	78	347	206	5,232
Participa -	D15	1.50	40	2,468	279	1,192	135	2,066	233	2,908	12,936	1,680	7,473	176	783	202	5,130
Standard	D20	2.00	50	4,527	512	1,700	192	2,944	333	4,016	17,864	2,318	10,311	310	1,379	142	3.606
	D10-DW	1.00	25	1,314	149	3,328	376	5,768	652	2,364	10,516	1,364	6,067	78	347	201	5,105
	D15-DW	1.50	40	4,936	558	13,558	1,532	23,468	2,652	5,816	25,871	3,360	14,946	176	783	194	4,927
Auxiliary Carrier	D20-DW	2.00	50	9,054	1,023	18,776	2,122	32,530	3,676	8,032	35,728	4,636	20,622	310	1,379	134	3,403
									,								
BC2	5	0.50	13	2	0.2	9	1.0	3	0.3	-	-	5	22	18	80	175	4,445
1 May	10	1.00	25	55	6.2	100	11.3	30	3.4	-	-	60	267	78	347	283	7,188
	12	1.25	32	75	8.5	290	32.8	130	14.7	-	-	120	534	124	552	280	7,112
Standard	15	1.50	38	275	31.1	500	56.5	200	22.6	-	-	180	801	176	783	278	7,061
	20	2.00	51	300	33.9	1,100	124.3	325	36.7	-	-	300	1,334	304	1,352	158	4,013
	25	2.50	64	450	50.8	1,800	203.4	400	45.2	-	-	400	1,779	490	2,180	238	6,045
BC2D	10D	0.50	13	110	12.4	287	32.4	287	32.4	-	-	120	534	78	347	278	7,061
a rice	12D	1.00	25	150	16.9	822	92.9	822	92.9	-	-	240	1,068	124	552	275	6,985
1 C	15D	1.25	32	550	62.1	1,453	164.2	1,453	164.2	-	-	360	1,601	176	783	272	6,909

LC 100	1.00	25	_	_	_	_	_	_	_	_	_	_	78	347	182	4,623

2,430

4,416

274.6

499.0

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2,669

3,559

600

800

304

490

1,352

2,180

3,810

5,791

150

228

274.6

499.0

For complete information on the LC-100, reference pneumatic brochures on the product resources section of www.tolomatic.com.

2,430

4,416

### **MAG COUPLED CYLINDERS**

20D

25D

38

51

600

900

67.8

101.7

1.50

2.00

Auxiliary Carrier

MG	025	0.25	6	_	—	—	_	_	_	_	_	_	_	5	22	26	660
hat a	038	0.38	8	_		_	_	_	_	_	_	_	_	11	49	32	813
1-10	062	0.62	16	_	-	_	_	_	_	_	_	_	_	28	125	39	991
	100	1.00	25	—	—	—	—	_	—	_	_	_	—	72	320	56	1,422

MGS	038	0.38	8	_	_	_	_	_	_	_	—	14	62	11	49	30	762
	062	0.62	16	_	_	_	_	_	_	_	_	40	178	28	125	60	1,524
	100	1.00	25	_	_	-	_	-	_	_	_	90	400	72	320	80	2,032



### **MOMENT & LOAD CAPACITY**

ACTUAL BORE SIZE         DENDING MOMENTS         LOAD         MAX. THRUST           MODEL         BORE SIZE         Mx         My         Mz         Fy         Fz         THRUST           MODEL         Size         in mm         in-lbs         N-m         in-lbs         N-m         ib         N         b         N         b         N         b         N         b         N         b         N         b         N         b         N         b         N         b         N         b         N         b         N         b         N         b         N         b         N         b         N	54         1,3,           138         3,5,5           282         7,1,0           280         7,1           281         7,1,2           281         7,1,2           280         7,1           281         7,1,2           280         7,1           281         7,1,2           280         7,1           280         7,1
MODEL         SiZE         in         mm         in-lbs         N-m         in-lbs         N-m         ib         N         lb         N         lb         N         lbf         N           CABLE CYLINDERS           07         0.75         13         -         -         -         -         -         -         19         80           07         0.75         19         -         -         -         -         -         43         197           10         1.00         25         -         -         -         -         -         78         344           15         1.50         38         -         -         -         -         -         74         77           20         2.00         51         -         -         -         -         -         -         174         774           25         2.50         64         -         -         -         -         -         -         1,398         6,214           40         4.00         102         -         -         -         -         -         -         1,398         6,214           50<	54         1,3,           138         3,5,5           282         7,1,0           280         7,1           281         7,1,2           281         7,1,2           280         7,1           281         7,1,2           280         7,1           281         7,1,2           280         7,1           280         7,1
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	138         3,50           282         7,10           280         7,11           281         7,13           281         7,13           281         7,13           280         7,11           281         7,13           280         7,11           280         7,13           280         7,14
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	138         3,50           282         7,10           280         7,11           281         7,13           281         7,13           281         7,13           280         7,11           281         7,13           280         7,11           280         7,13           280         7,14
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	282         7,10           280         7,11           281         7,11           281         7,11           281         7,11           280         7,11           281         7,12           281         7,13           280         7,11           281         7,13           280         7,11           280         7,11           280         7,11           280         7,11           280         7,11           279         7,00
15       1.50       38       -       -       -       -       -       -       174       774         20       2.00       51       -       -       -       -       -       -       618       2,745         25       2.50       64       -       -       -       -       -       972       4,324         30       3.00       76       -       -       -       -       -       972       4,324         30       3.00       76       -       -       -       -       -       972       4,324         40       4.00       102       -       -       -       -       -       1,249       5,556         50       5.00       127       -       -       -       -       -       1,919       8,536         52       2.00       51       -       -       -       -       -       1,532       6,814	280         7,1           281         7,1           281         7,1           281         7,1           280         7,1           281         7,1           280         7,1           280         7,1           281         7,1           281         7,1           281         7,1           280         7,1           279         7,0
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	281         7,13           281         7,13           281         7,13           280         7,13           280         7,13           279         7,00
25       2.50       64       -       -       -       -       -       972       4,324         30       3.00       76       -       -       -       -       -       -       972       4,324         30       3.00       76       -       -       -       -       -       -       1,398       6,219         40       4.00       102       -       -       -       -       -       -       1,249       5,556         50       5.00       127       -       -       -       -       -       1,919       8,536         52       2.00       51       -       -       -       -       -       -       1,532       6,815	281         7,13           280         7,1           280         7,1           279         7,00
30       3.00       76       -       -       -       -       -       -       1,398       6,219         40       4.00       102       -       -       -       -       -       -       1,249       5,550         50       5.00       127       -       -       -       -       -       1,919       8,530         52       2.00       51       -       -       -       -       -       -       1,532       6,812	280         7,1           279         7,00
40       4.00       102       -       -       -       -       -       -       1,249       5,556         50       5.00       127       -       -       -       -       -       1,919       8,536         52       2.00       51       -       -       -       -       -       1,532       6,816	i 279 7,00
50       5.00       127       -       -       -       -       -       1,919       8,536         52       2.00       51       -       -       -       -       -       1,532       6,815	
52       2.00       51       -       -       -       -       -       -       1,532       6,812         SA       07       0.75       19       -       -       -       -       -       43       191	12/ 2/
SA 07 0.75 19 43 19	<u>134</u> 3,40
	280 7,1
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52 2.00 57 1,532 6,813	280 7,1
DP 15 1.50 38 174 774	280 7,1
20 2.00 51 618 2,745	281 7,13
25 2.50 64 972 4,324	281 7,13
30 3.00 76 1,398 6,215	280 7,1
40 4.00 102 1,249 5,550	279 7,00
52     2.00     51     -     -     -     -     -     1,532     6,812	280 7,1
TC 05 0.50 13 60 267 19 88	
15 1.25 38 150 667 174 774	282 7,1
ROD CYLINDER SLIDES	
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$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	
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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
PB2 08 0.50 13 8 36 20 85	4 10
	6 1
	6 1
20 1.25 32 48 214 125 556	
20       1.25       32           48       214       125       556         32       2.00       51           70       311       306       1,363	6 13

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Tolomatic offers a complete product line of rodless and slide actuators, rod-style electric actuators, controllers and complete motion systems.

- Over 35 distinct product lines detailed in over 4,000 web pages.
- Actuators built to your specified stroke length – Five days or less.

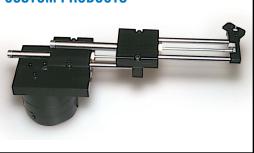
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Modified products, like this MXP with custom rail and carrier, extend the range of applications where Tolomatic products can be used.

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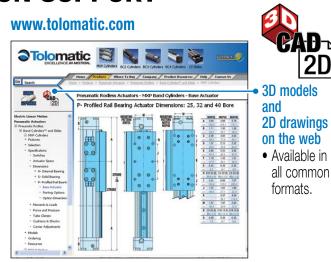
Challenges like this multi-axis actuator, built to fit a manufacturer's motion, space and accuracy requirements, are a regular part of our daily activities.

- Custom solutions for unique motion requirements.
- We will work with you to design a motion product within your space, budget, and time requirements.

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# Storing Report EXECUTION France (Section Control (Sectio

 SIZING AND SELECTION SOFTWARE - FREE, downloadable from our website. Supply your application information and the software will calculate the proper actuator for your application.



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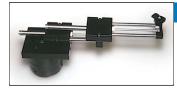
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