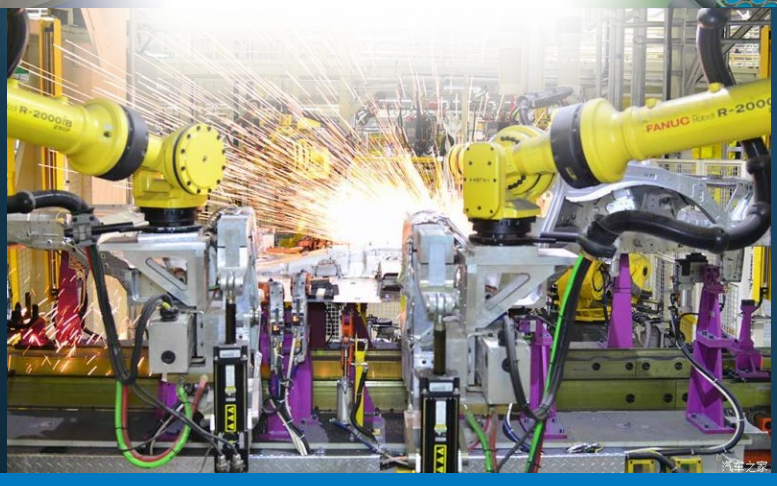
Tolomatic™
EXCELLENCE *IN MOTION*

LINEAR MOTION SOLUTIONS



Accelerating the World with Innovative Motion Technology

Tolomatic™ A legacy of innovation

EXCELLENCE *IN MOTION*

Accelerating the World with Innovative Motion Technology

1954: 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 and Cable Cylinders – **world's first rodless pneumatic cylinder**

1980's: 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

1990's: MOTION CONTROL & ELECTRIC ACTUATORS
Tolomatic responded to industry demands for improved accuracy, repeatability, and efficiency as well as more advanced motion control technology with products designed for pneumatic & hydraulic replacement.

- 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

2000's: COMPACT, HIGH PERFORMANCE INTEGRATED SERVO ACTUATORS
ServoWeld® - Innovative design developed for Automotive industry

Widest range of integrated models to meet specific industry needs

2010's: PLANETARY ROLLER SCREW DESIGNS
Full in-house production for industry leading planetary roller screws

2020's: TOLOMATIC'S CONTINUOUS INVESTMENTS TO SERVE CUSTOMERS
Quality system certified to ISO 9001:2015 standard

Corporate headquarters and factory in suburban Minneapolis, MN

Facilities in China, Europe and Mexico

Innovative motion control products, exceptional quality and service... that's Tolomatic

in solving customer needs.

Tolomatic makes it easy to select the right product for your application

Educational Resources
tolomatic.com/info-center

Ask an Engineer
tolomatic.com/ask

Actuator Sizing
sizeit.tolomatic.com

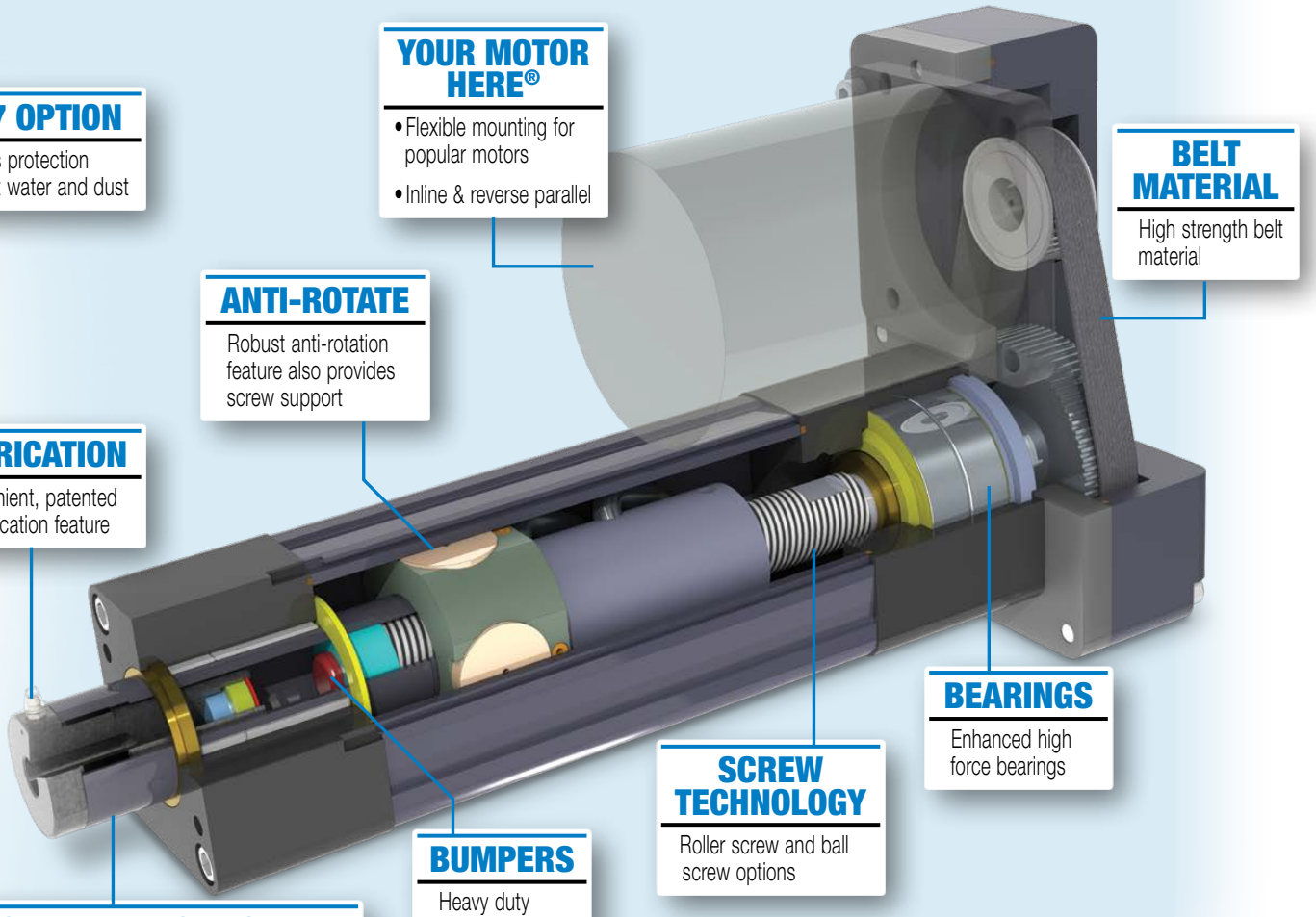
CAD Library
tolomatic.com/CAD

Your Motor Here®
tolomatic.com/ymh

Engineering Tools on www.tolomatic.com

ENDURANCE TECHNOLOGY℠

A Tolomatic Design Principle



Tolomatic™ Linear Motion Solutions

EXCELLENCE *IN MOTION*

AUTOMOTIVE

Resistance Spot Welding, Joining, Pressing, Riveting, Stamping, Nut Placement

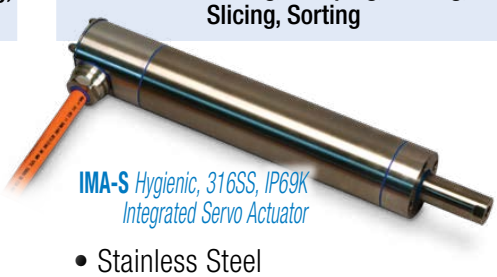
- Compact, Lightweight
- Integrated Servo Motor
- Long Life Roller Screw Design

SWA *ServoWeld® Actuator*

IMA *Integrated Servo Actuator*

FOOD & BEVERAGE

Volumetric Filling, Pumping, Cutting, Slicing, Sorting



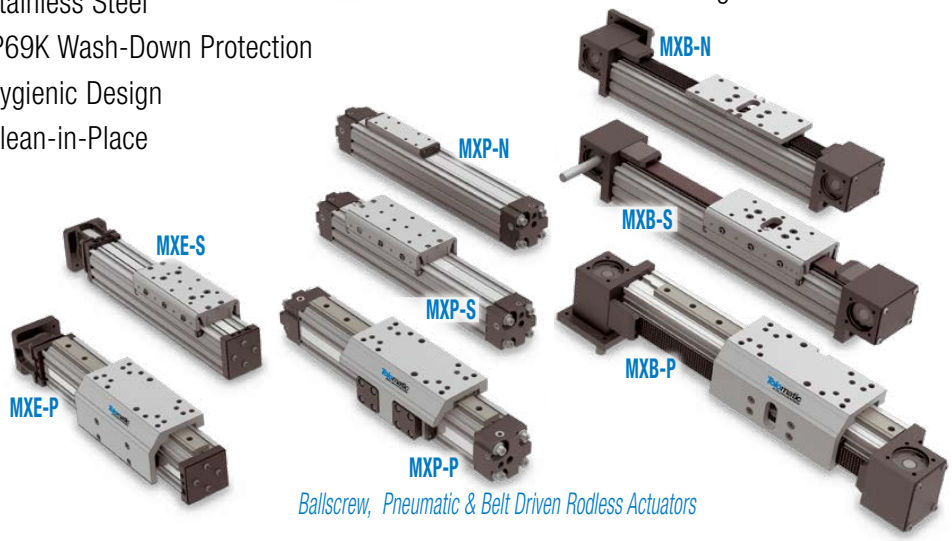
IMA-S *Hygienic, 316SS, IP69K Integrated Servo Actuator*

- Stainless Steel
- IP69K Wash-Down Protection
- Hygienic Design
- Clean-in-Place

PACKAGING

Positioning, Sealing, Forming, Pressing, Palletizing, Filling

- Electric & Pneumatic Rodless Actuators
- Configurable Stroke Lengths
- Wide Array of Load and Speed Capabilities
- Flexible Motor Mounting



Ballscrew, Pneumatic & Belt Driven Rodless Actuators

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

for Most Industries and Applications

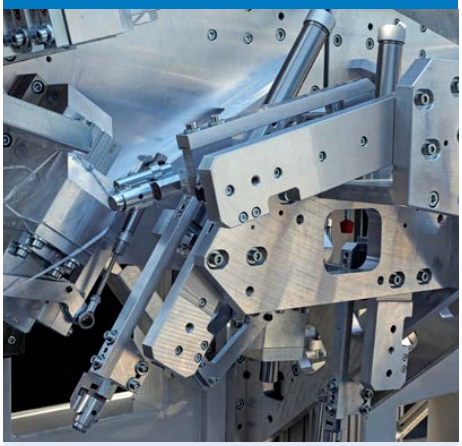
TIMBER & BUILDING PRODUCTS

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

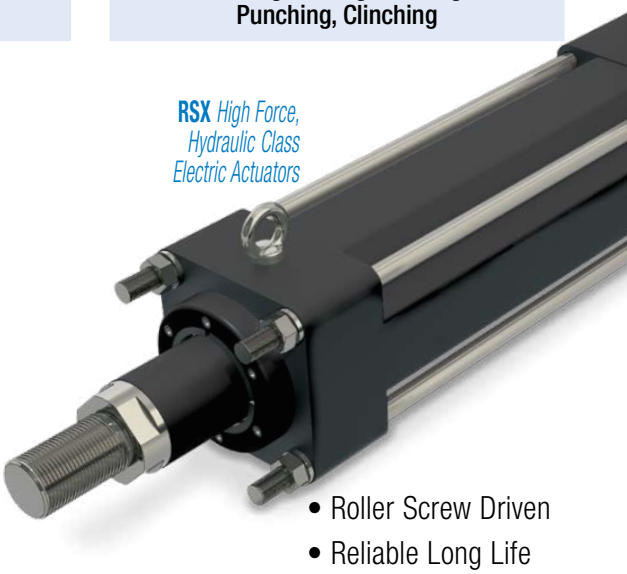
- Flexible & Efficient
- Full Motion Control Capabilities
- Minimal Maintenance
- Reliable Long Life
- Lowest Total Cost of Ownership

ERD 10-20 *Economical, Pneumatic Class Electric Actuators*

METALS & FABRICATION

Casting, Cutting, Bending, Punching, Clinching

RSX *High Force, Hydraulic Class Electric Actuators*



- Roller Screw Driven
- Reliable Long Life
- Robust Design

ENTERTAINMENT & ANIMATION

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

ELECTRIC LINEAR

ROD STYLE SCREW

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:

ERD		10	15	20
MAX. STROKE	in	10	24	24
	mm	254	609	609
MAX. FORCE	lbf	100	200	500 (315 SS2)
	N	445	890	2 224 (1 401 SS2)
MAX. SPEED per sec	in	40	40	38
	mm	1 016	1 016	965

- Patented

RSH STAINLESS STEEL, HYGIENIC

SOLUTION FOR:

- Pneumatic & hydraulic replacement
- Food & beverage processing

STANDARD FEATURES:

- Full stainless steel construction
- Roller or Ball screw driven
- Your Motor Here® flexible inline or reverse parallel motor mounting
- IP69k ingress protection
- Replaceable dual seal system
- Grease port for re-lubrication without disassembly

OPTIONS:

- Seals with protection from abrasives or caustic chemicals
- Internal anti-rotate
- Metric mounting and rod-end accessories

SPECIFICATIONS:

RSH		22	25	30
MAX. STROKE	in	39.4	39.4	48
	mm	1 000	1 000	1 219
MAX. FORCE	lbf	1 700	4 159	7 943
	N	7 562	18 500	35 330
MAX. SPEED per sec	in	19.6	19.6	19.6
	mm	498	498	498

- Patented

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:

RSA		12	16	24	32	50	64
MAX. STROKE	in	12	18	24	36	48	60
	mm	305	457	610	914	1219	1524
MAX. FORCE	lbf	130	130	1700	4159	7868	13039
	N	578	578	7562	18500	34999	58001
MAX. SPEED per sec	in	123	123	50	50	50	58
	mm	3124	3124	1270	1270	1270	1473

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 mounting and rod-end accessories
- Reed, solid state PNP or NPN switches, quick-connect available

SPECIFICATIONS:

RSX		080	096	096P	128
MAX. STROKE	in	35.03	31.49	17.71	26.18
	mm	890	800	450	665
MAX. FORCE	lbf	18 000	30 000	40 000	50 000
	kN	80.1	133.5	178	222.4
MAX. SPEED per sec	in	27.6	29.9	29.9	19.7
	mm	700	759	759	500

MOTION PRODUCTS

Fast delivery Built-to-Order

DRIVE ACTUATORS

GSA GUIDED LOAD

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:

GSA		12	16	24	32
MAX. STROKE	in	18	24	30	36
	mm	457	609	762	914
MAX. FORCE	lbf	130	471	850	950
	N	578	2095	3781	4226
MAX. LOAD	lb	400	500	1000	1200
	N	1779	2224	4448	5338
MAX. SPEED	in	123	123	50	50
per sec	mm	3124	3124	1270	1270

IMA COMPACT, INTEGRATED SERVO

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 manufacturers
- White epoxy, food grade coating with stainless hardware
- IP67 ingress protection
- Holding brake
- Metric mounting & rod-end accessories

SPECIFICATIONS:

IMA		22	33		44		55	
		Ball	Ball	Roller	Ball	Roller	Ball	Roller
MAX. STROKE	in	12	18	18	18	18	18	18
	mm	305	457	457	457	457	457	457
MAX. FORCE	lbf	325	1000	2500	2000	4000	3000	6875
	kN	1.45	4.45	11.1	8.90	17.8	13.35	30.6
MAX. SPEED	in	28	48	24	52.5	23	31.4	15.7
per sec	mm	711	1219	610	1334	584	787	399

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

SPECIFICATIONS:

IMA-S		22	33		33SA
		Ball	Ball	Roller	Roller
MAX. STROKE	in	12	18	18	12
	mm	305	457	457	305
MAX. FORCE	lbf	325	1000	2500	2500
	kN	1.45	4.45	11.1	11.1
MAX. SPEED	in	19.6	19.6	19.6	19.6
per sec	mm	500	500	500	500

SWA/B* RESISTANCE SPOT WELDING

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
- Holding brake
- Metric mounting

SPECIFICATIONS:

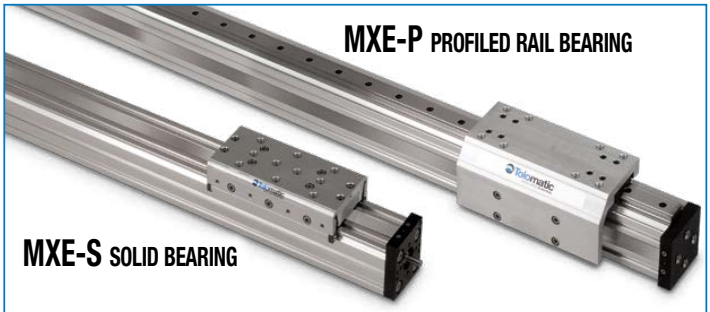
		SWA/B		CSWX	
		3	4	RN05XR	RN10
MAX. STROKE	in	6	12	6.3	6.3
	mm	152	305	160	160
MAX. FORCE	lbf	2500	4950	4047	2350
	kN	11.1	22.0	18.0	10.5
MAX. SPEED	in	23	23	13.8	27.6
per sec	mm	584	584	350	700

*Contact Tolomatic for price and lead time

ELECTRIC LINEAR

RODLESS SCREW DRIVE ACTUATORS

MXE-P PROFILED RAIL BEARING



MXE-S SOLID BEARING

MXE-S

SOLUTION FOR:
- Light to moderate loads & moments

STANDARD FEATURES:
- Self-lubricating solid bearing

OPTIONS:
- Floating mount

MXE-P

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

STANDARD FEATURES:
- Profiled rail ball bearing

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:

		16	25	32	40	50	63
MAX. STROKE	in	31	134	133	131	178	125
	mm	*787*	*3404*	*3378*	*3327*	*4521*	*3175*
MAX. FORCE	lbf	45	170	170	800	2700	4300
	N	*200*	*756*	*756*	*3559*	*12010*	*19127*
MAX. SPEED per sec	in	42	60	60	60	60	50
	mm	*1067*	*1524*	*1524*	*1524*	*1524*	*1270*

		16S	16P	25S	25P	32S	32P	40S	40P	50S	50P	63S	63P
*MAX. LOAD	lb	35	217	70	449	150	569	225	736	315	1014	520	1292
	N	*156*	*966*	*311*	*1996*	*667*	*2531*	*1001*	*3274*	*1401*	*4510*	*2313*	*5745*

*Auxiliary carrier option offers increased load and bending moment capacity

B3S INTERNAL RE-CIRCULATING BALL 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 for higher load & moment capacity
- Metric or US Standard mounting
- Reed, solid state PNP or NPN switches

SPECIFICATIONS:

B3S		10	15	20
MAX. STROKE	in	136	133	131
	mm	*3454*	*3378*	*3337*
MAX. FORCE	lbf	170	800	2700
	N	*756*	*3559*	*12010*
*MAX. LOAD	lb	591	1454	2008
	N	*2629*	*6468*	*8932*
MAX. SPEED per sec	in	60	60	60
	mm	*1524*	*1524*	*1524*

*Dual 180° & auxiliary carrier options offer increased load and bending moment capacity

TRS DUAL PROFILE RAIL BEARING

SOLUTION FOR:
- High requirements for flatness, straightness & accuracy
- Moderate loads & moments

STANDARD FEATURES:
- Anodized aluminum design
- Dual profile rail linear table design
- Clean, smooth enclosed design keeps potential contaminants away from interior components
- Stainless steel dust bands
- Roller or ball screw driven
- Inline or reverse-parallel motor mount

OPTIONS:
- Toe clamps
- Reed, solid state PNP or NPN switches with rails

SPECIFICATIONS:

TRS		100	165
MAX. STROKE	in	29.5	43.3
	mm	*750*	*1100*
MAX. FORCE	lbf	562	562
	N	*2500*	*2500*
*MAX. LOAD	lb	1085	1356
	N	*4800*	*6000*
MAX. SPEED per sec	in	36	36
	mm	*914*	*914*

*Auxiliary carrier option offers increased load and bending moment capacity

MOTION PRODUCTS

Fast delivery Built-to-Order

RODLESS BELT DRIVE ACTUATORS

MXB-U

SOLUTION FOR:

- Loads that are externally guided and supported

STANDARD FEATURES:

- Low profile mounting plate

MXB-S

SOLUTION FOR:

- Light to moderate loads and moments

STANDARD FEATURES:

- Self-lubricating solid bearing

OPTIONS:

- Floating mount
- Auxiliary carrier for higher load & moment capacity

MXB-P

SOLUTION FOR:

- Moderate to high loads and moments
- Stable, precision load guidance

STANDARD FEATURES:

- Profiled rail ball bearing

OPTIONS:

- Auxiliary carrier for higher load & moment capacity

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

COMMON OPTIONS:

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

SPECIFICATIONS:

		16	25	32	40	50	63
MAX. STROKE	in	200	200	200	200	160	100
	mm	5080	5080	5080	5080	4064	2540
MAX. FORCE	lbf	38	151	209	250	325	418
	N	169	672	930	1112	1446	1859

		16S	16P	25S	25P	32S	32P	40S	40P	50S	50P	63S	63P
*MAX. LOAD	lb	35	217	70	449	150	569	225	736	315	1014	520	1292
	N	156	966	311	1996	667	2531	1001	3274	1401	4510	2313	5745
MAX. SPEED	in/sec	MXB-U = 200 in/sec • MXB-S = 100 in/sec • MXB-P = 150 in/sec											
	mm/sec	MXB-U = 5080 mm/sec • MXB-S = 2540 mm/sec • MXB-P = 3810 mm/sec											

*Auxiliary carrier option offers increased load and bending moment capacity

B3W RE-CIRCULATING BALL 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
- Belt driven: steel reinforced belts
- Your Motor Here® flexible motor mounting

OPTIONS:

- Auxiliary carrier • Dual 180 carrier for higher load & moment capacity
- Metric or US Standard mounting
- Reed, solid state PNP or NPN switches

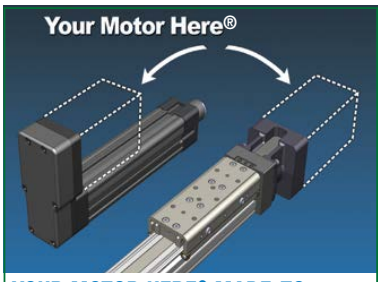
SPECIFICATIONS:

B3W		10	15	20
MAX. STROKE	in	207	204	156
	mm	5258	5182	3962
MAX. FORCE	lbf	150	250	325
	N	667	1112	1446
*MAX. LOAD	lb	591	1454	2008
	N	2629	6468	8932
MAX. SPEED per sec	in	157	200	200
	mm	3988	5080	5080

*Dual 180° & auxiliary carrier options offer increased load and bending moment capacity

DRIVES & MOTORS

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** to find your motor/actuator match!

ACSI INTEGRATED MOTOR/DRIVE/CONTROLLER

STANDARD FEATURES:

- Integrated servo motor/drive
- NEMA 23 & 34 frame sizes
- Mounted, configured, tuned & tested as an actuator system
- Dual Ethernet ports: EtherNet/IP™ & Modbus TCP

IN PARTNERSHIP WITH THESE MANUFACTURERS AND OTHERS FOR MORE OPTIONS

JVL www.jvl.dk

Nidec CONTROL TECHNIQUES

BAND CYLINDERS

MXP-N INTERNAL BEARING

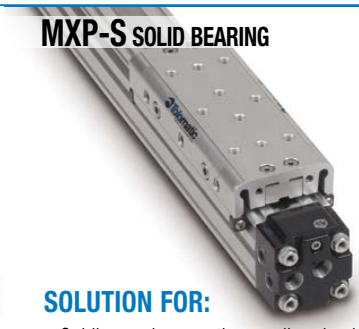
SOLUTION FOR:

- 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

MXP-S SOLID BEARING



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

MXP- P PROFILED RAIL BEARING

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

COMMON STANDARD FEATURES:

- Non-wear stainless steel bands
- Adjustable internal end-of-stroke cushion
- Single piece high strength piston up to 28% stronger than competition

COMMON OPTIONS:

- Tube clamps
- Auxiliary carrier
- Adjustable and fixed shock absorbers
- Single end porting
- Reed or solid state position sensors
- Foot mount
- Metric or US Standard mounting

SPECIFICATIONS:

		16	25	32	40	50	63
BORE SIZE	in	0.63	1.00	1.25	1.50	2.00	2.50
	mm	*16*	*25*	*32*	*38*	*50*	*64*
MAX. STROKE	in	206	206	205	203	203	103
	mm	*5232*	*5232*	*5207*	*5156*	*5156*	*2616*
MAX. FORCE	lbf	30.7	78.5	123	177	305	491
	N	*136*	*349*	*546*	*786*	*1356*	*2184*

		16N	16S	16P	25N	25S	25P	32N	32S	32P	40N	40S	40P	50N	50S	50P	63N	63S	63P
*MAX. LOAD	lb	30	35	217	65	70	449	115	150	569	195	225	736	270	315	1014	370	520	1292
	N	*133*	*156*	*965*	*289*	*311*	*1997*	*512*	*667*	*2531*	*867*	*1001*	*3274*	*1201*	*1401*	*4511*	*1646*	*2313*	*5747*

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

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:

		10	15	20
BORE SIZE	in	1.00	1.50	2.00
	mm	*25*	*32*	*50*
MAX. STROKE	in	205	202	142
	mm	*5207*	*5130*	*3606*
MAX. FORCE	lbf	78	176	310
	N	*347*	*783*	*1379*
*MAX. LOAD	lb	591	1454	2008
	N	*2629*	*6468*	*8932*

*Auxiliary and dual 180° carrier doubles the load capacity and also increases My and Mz bending moment capacity.

Not all models deliver maximum values listed. See catalog or contact Tolomatic for complete specifications.

ACTUATORS

Fast delivery Built-to-Order

CYLINDERS

CABLE CYLINDERS

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:

		05	10	12	15	20	25
BORE SIZE	in	0.50	1.00	1.25	1.50	2.00	2.50
	mm	12	25	32	40	50	63
MAX. STROKE	in	171	350	288	298	274	163
	mm	4343	8890	7315	7569	6959	4140
MAX. FORCE	lbf	16	78	120	176	310	495
	N	71	347	534	783	1379	2202
*MAX. LOAD	lb	5.0	60	120	180	300	400
	N	22	267	534	801	1334	1779

*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:

		05	07	10	15
BORE SIZE	in	0.50	0.75	1.00	1.50
	mm	13	19	25	38
MAX. STROKE	in	67	80	80	80
	mm	1702	2032	2032	2032
MAX. FORCE	lbf	19	43	78	174
	N	85	191	347	774
MAX. LOAD	lb	60	60	60	15
	N	267	267	267	67

CC DOUBLE-ACTING SA SINGLE-ACTING DP DOUBLE-PURCHASE

SOLUTION FOR:

- Loads that are externally guided and supported

SOLUTION FOR:

- Used where gravity supplies return force
- Loads that are externally guided and supported

SOLUTION FOR:

- Effectively doubles stroke length and speed
- 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:

	CC	05	07	10	15	20	25	30	40	50	52
	SA	—	07	10	15	20	25	30	40	50	52
	DP	—	—	—	15	20	25	30	40	—	52
BORE SIZE	in	0.50	0.75	1.00	1.50	2.00	2.50	3.00	4.00	5.00	2.00
	mm	13	19	25	38	51	64	76	102	127	51
MAX. STROKE	in	60	138	282	280	281	281	280	279	134	280
	mm	1524	3505	7163	7112	7137	7137	7112	7087	3404	7112
MAX. FORCE	lbf	19	43	78	174	618	972	1398	1249	1919	1532
	N	85	191	347	774	2749	4324	6219	5556	8536	6815

Not all models deliver maximum values listed. See catalog or contact Tolomatic for complete specifications.

PNEUMATIC ACTUATORS
(CONTINUED)

Fast delivery Built-to-Order

RODLESS CYLINDERS

MAG 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

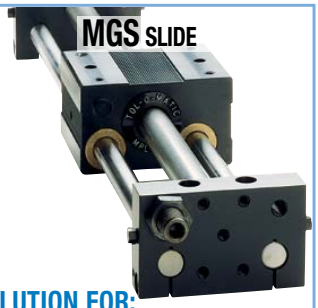
OPTIONS:

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

SPECIFICATIONS:

		025	038	062	100
BORE SIZE	in	0.25	0.38	0.62	1.00
	mm	*6*	*10*	*16*	*25*
MAX. STROKE	in	26	32	80	80
	mm	*660*	*813*	*2032*	*2032*
MAX. FORCE	lbf	5	11	30	78
	N	*22*	*49*	*133*	*347*
MAGNETIC STRENGTH	lb	5	14	38	100
	N	*22*	*62*	*169*	*445*

MGS SLIDE



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:

- Fully enclosed design keeps contaminants from entering or lubricants from exiting actuator body
- Low profile rigid design
- Stainless steel tubing
- Hardened steel shafts

OPTIONS:

- Pneumatic or hydraulic power
- Choose either sintered bronze or linear ball bearings
- Shock absorbers • Proximity sensors
- Reed or solid state position sensors

SPECIFICATIONS:

		038	062	100
BORE SIZE	in	0.38	0.63	1.00
	mm	*10*	*16*	*25*
MAX. STROKE	in	30	37	55
	mm	*762*	*940*	*1397*
MAX. FORCE	lbf	11	30	78
	N	*49*	*133*	*347*
MAX. LOAD	lb	14	40	90
	N	*62*	*178*	*400*

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
- Operating pressure up to 100 PSI
- 10,000,000 cycle rating
- Standard internal piston magnet for switch sensing
- Lightweight aluminum design

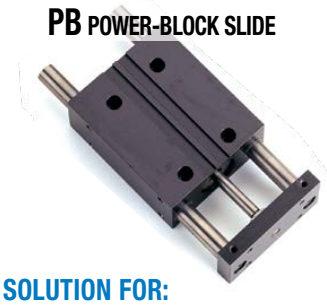
OPTIONS:

- Choose composite or linear ball bearings
- Reed or solid state position sensors

SPECIFICATIONS:

		10	17	20	32
BORE SIZE	in	0.63	1.06	1.25	2.00
	mm	*16*	*27*	*32*	*51*
MAX. STROKE	in	4	6	6	6
	mm	*102*	*152*	*152*	*152*
MAX. FORCE	lbf	30	88	122	314
	N	*133*	*391*	*542*	*1396*
MAX. LOAD	lb	16	38	48	70
	N	*71*	*169*	*214*	*311*

PB POWER-BLOCK 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:

		17	20
BORE SIZE	in	1.06	1.25
	mm	*27*	*32*
MAX. STROKE	in	3	3
	mm	*76*	*76*
MAX. FORCE	lbf	88	123
	N	*391*	*547*
MAX. LOAD	lb	20	25
	N	*76*	*89*

Not all models deliver maximum values listed. See catalog or contact Tolomatic for complete specifications.

POWER TRANSMISSION

Fast delivery Built-to-Order

GEARBOXES

SLIDE-RITE® GEARBOX

COMPACT STANDARD

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 1 200 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
- 1:1, 3:2, 2:1 gear ratios

SPECIFICATIONS*

SERIES	RATIO	NO. OF MODELS	ENVELOPE SIZE (in.)
Compact	1:1	12	3.1 x 3.1 x 3.1
Compact-CR	1:1	6	3.1 x 3.1 x 3.1
Standard	1:1	24	3.8 x 5.9 x 3.8
Standard	3:2, 2:1	12, 18	3.8 x 5.9 x 3.8
Standard-CR	1:1	12	3.8 x 5.9 x 3.8

FLOAT-A-SHAFT® GEARBOX

COMPACT STANDARD

STANDARD FEATURES:

- Designed to slide along the shaft, limited only by the length of the keyway
- Shaft speeds up to 500 RPM
- 3° to 5° of backlash
- Die-cast aluminum gear case, hardened steel gears
- Bore Sizes: Compact; .5", .625", 12mm & 15mm
  Standard; .75", 1", 1.25", 1.5",
  20mm, 25mm & 30mm

OPTIONS:

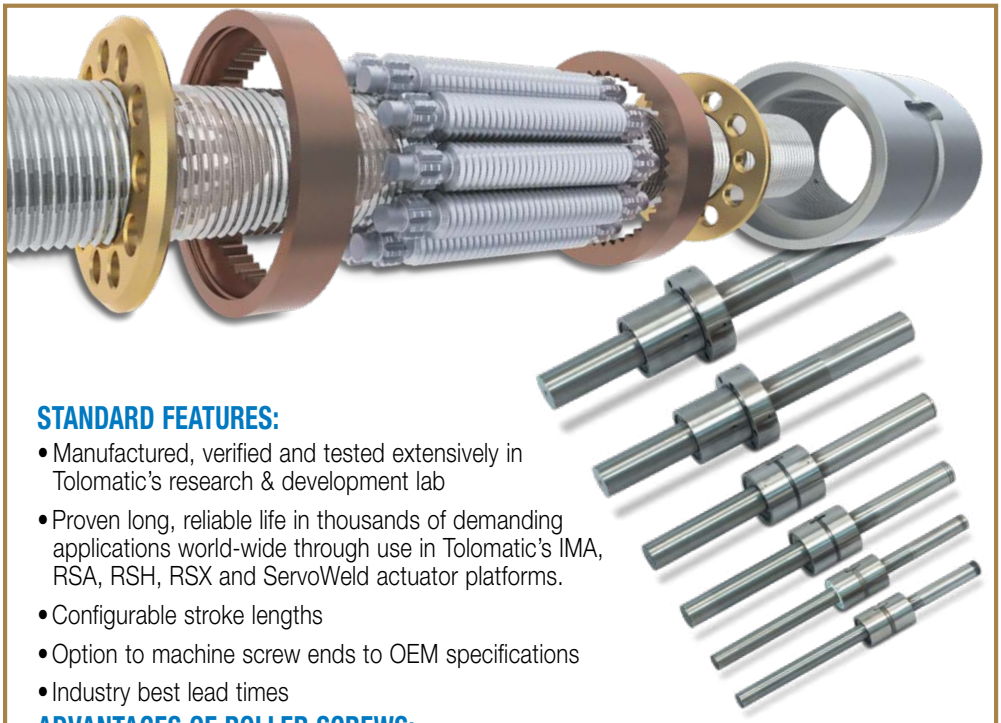
- Flat base and foot mount styles
- 1:1, 3:2, 2:1, 2.5:1 gear ratios
- Low torque journal bearings or high torque roller bearings

SPECIFICATIONS*

SERIES	RATIOS	NO. OF MODELS	ENVELOPE SIZE (in.)
Compact	1:1	18	2.9 x 3.5 x 3.0
Compact-Foot Mount	1:1	18	3.0 x 3.7 x 3.0
Standard	1:1, 3:2, 2:1	44, 22, 36	3.8 x 6.3 x 4.3
Standard-Flat Base	1:1, 3:2, 2:1	44, 22, 24	3.8 x 6.3 x 4.0
Standard	2.5:1	12	2.9 x 5.1 x 4.2

*Not all models deliver maximum values listed. See catalog or contact Tolomatic for complete specifications.

PLANETARY ROLLER SCREWS



STANDARD FEATURES:

- Manufactured, verified and tested extensively in Tolomatic's research & development lab
- Proven long, reliable life in thousands of demanding applications world-wide through use in Tolomatic's IMA, RSA, RSH, RSX and ServoWeld actuator platforms.
- Configurable stroke lengths
- Option to machine screw ends to OEM specifications
- Industry best lead times

ADVANTAGES OF ROLLER SCREWS:

- Capable of handling heavy loads, planetary roller screws contain precision ground rollers engaged with a precision ground screw and nut. When compared with a ball screw of the same size and lead, the roller screw components are designed to increase points of contact and a larger contact radius. This results in less stress per point of contact and allows roller screws to carry higher loads.

SPECIFICATIONS

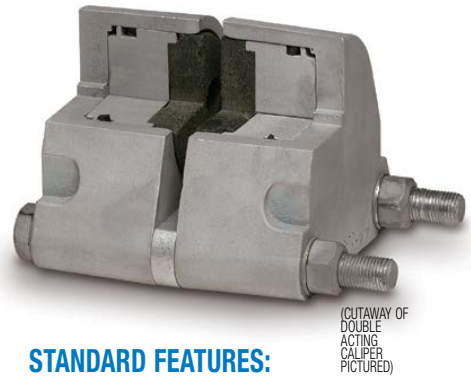
CONFIG-URATION	SCREW SIZE	LEAD mm	MAX. STROKE mm
15.04	15	4	699.0
15.05	15	5	699.0
15.10	15	10	699.0
20.04	20	4	1036.2
20.05	20	5	1036.2
20.10	20	10	1036.2
30.05	30	5	980.2
30.10	30	10	980.2
36.05	36	5	954.5
36.10	36	10	954.5
39.10	39	10	911.5
48.12	48	12	830.7
63.10	63	10	737.0

Dimensions in millimeters

CONFIG-URATION	SCREW SIZE	LEAD in	MAX. STROKE in
15.04	15	0.157	27.52
15.05	15	0.197	27.52
15.10	15	0.394	27.52
20.04	20	0.157	40.80
20.05	20	0.197	40.80
20.10	20	0.394	40.80
30.05	30	0.197	38.59
30.10	30	0.394	38.59
36.05	36	0.197	37.58
36.10	36	0.394	37.58
39.10	39	0.394	35.89
48.12	48	0.472	32.70
63.10	63	0.394	29.02

Dimensions in inches

PNEUMATIC



(CUTAWAY OF DOUBLE ACTING CALIPER PICTURED)

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*

	NO. OF MODELS	FRICTION MATERIAL (cu. in.)	TOTAL LINING AREA (sq. in.)	PISTON DIA. (in.)
P10	11	0.46	2.00	1.125
P20	13	0.83	4.00	1.625
P220	12	1.66	8.00	1.625

PERFORMANCE OVERVIEW*

DYNAMIC TORQUE (MAX. in.-lbs.)

DISC DIA. (in.)	P10	P20	P220
6.313	174	328	685
8	233	450	907
10	303	594	1184
12	373	738	1463
16	513	1026	2076

STATIC TORQUE (MAX. in.-lbs.)

DISC DIA. (in.)	P10	P20	P220
6.313	99	164	343
8	133	225	454
10	173	297	592
12	213	369	732
16	293	513	1038

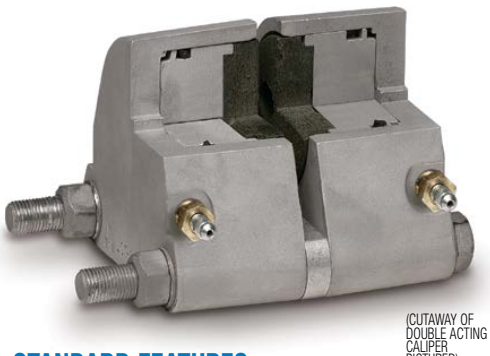
*Not all models deliver maximum values listed. See catalog or contact Tolomatic for complete specifications.

TRANSMISSION
(CONTINUED)

Fast delivery
Built-to-Order

CALIPER DISC BRAKES

HYDRAULIC



(CUTAWAY OF DOUBLE ACTING CALIPER PICTURED)

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*

	NO. OF MODELS	FRICTION MATERIAL (cu. in.)	TOTAL LINING AREA (sq. in.)	PISTON DIA. (in.)
H10	14	0.46	2.00	1.125
H20	23	0.83	4.00	1.625
H220	52	1.66	8.00	1.625
H441	4	3.71	9.14	2.50
H960	6	8.00	32.0	3.50

PERFORMANCE OVERVIEW*

DYNAMIC TORQUE (MAX. in.-lbs.)

DISC DIA. (in.)	H10	H20	H220	H441	H960
6.313	1737	3285	10282	—	—
8	2328	4500	13608	—	—
10	3028	5940	17755	19539	—
12	3728	7380	21946	24834	45672
16	5128	10260	31147	35424	66432

STATIC TORQUE (MAX. in.-lbs.)

DISC DIA. (in.)	H10	H20	H220	H441	H960
6.313	993	1642	5141	—	—
8	1330	2250	6804	—	—
10	1730	2970	8878	11679	—
12	2130	3690	10973	14844	26664
16	2930	5130	15574	21174	38784

MECHANICAL

(ME20)

STANDARD FEATURES:

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

OPTIONS:

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

SPECIFICATIONS*

	NO. OF MODELS	FRICTION MATERIAL (cu. in.)	TOTAL LINING AREA (sq. in.)
ME10	8	0.46	2.00
ME20	12	0.83	4.00
ME220	15	1.66	8.00
MB3	1	6.06	9.69

PERFORMANCE OVERVIEW*

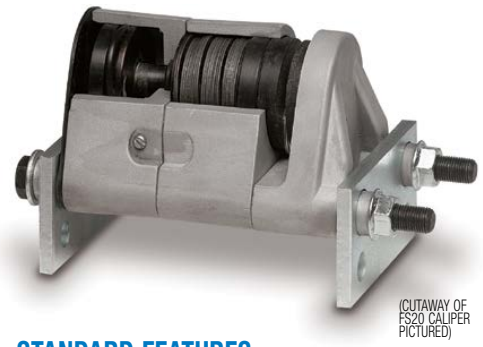
DYNAMIC TORQUE (MAX. in.-lbs.)

DISC DIA. (in.)	ME10	ME20	ME220
6.313	3004	2762	11702
8	4024	3782	15488
10	5236	4994	20208
12	6446	6204	24978
16	8866	8624	35452

STATIC TORQUE (MAX. in.-lbs.)

DISC DIA. (in.)	ME10	ME20	ME220	MB3
6.313	1502	1381	5851	—
8	2012	1891	7744	—
10	2618	2497	10104	19893
12	3223	3102	12489	24506
16	4433	4312	17726	33733

SPRING APPLIED/HYDRAULIC RELEASE



(CUTAWAY OF FS20 CALIPER PICTURED)

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*

	NO. OF MODELS	FRICTION MATERIAL (cu. in.)	TOTAL LINING AREA (sq. in.)
FS20	6	0.83	4.00
FS220	24	1.66	8.00
FS595	8	4.57	9.14

PERFORMANCE OVERVIEW*

STATIC TORQUE (MAX. in.-lbs.)

DISC DIA. (in.)	FS20	FS220B	FS220C	FS595	FS595 DUAL
6.313	1061	2213	4522	—	—
8	1453	2930	5985	—	—
10	1918	3822	7809	—	—
12	2383	4724	9652	—	—
16	3313	6705	13699	31046	62093

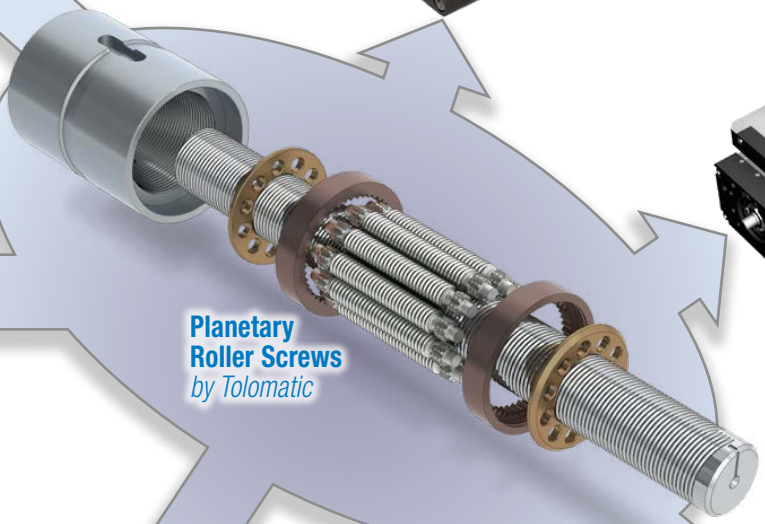
*Not all models deliver maximum values listed. See catalog or contact Tolomatic for complete specifications.

Long Lasting, Precision Roller Screw Electric Actuators

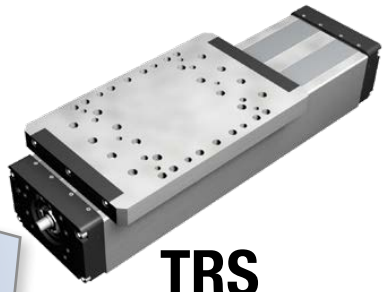
IMA
- Integrated Servo Motor
- High Performance
- Compact Rugged Design

RSA
- Pneumatic & Hydraulic Replacement

SWA



Planetary Roller Screws *by Tolomatic*



TRS
- Highly Rigid Twin Rail Stage Design

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

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

RSX
- Extreme Force
- Hydraulic Replacement

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EXCELLENCE *IN MOTION*

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