Tolomatic
EXCELLENCE *IN MOTION*®

ENDURANCE TECHNOLOGY℠

RSX
EXTREME FORCE, HYDRAULIC CLASS ELECTRIC ACTUATOR

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www.servo2go.com

LINEAR SOLUTIONS MADE EASY

RSX Extreme Force, Hydraulic Class Electric Actuator

WHAT IS THE RSX?

The RSX is an extreme force electric actuator designed for rugged service, long life and is an ideal choice for replacing hydraulic cylinders. The RSX utilizes roller screws for long lasting consistent performance. Additionally, the RSX uses Tolomatic's popular Your Motor Here program which allows RSX to easily mount most servo motor and gearboxes on the market

TOLOMATIC'S ELECTRIC ROD-STYLE ACTUATORS

	ERD	RSA	RSX	GSA	IMA
	Rod-Style Actuator	***Rod-Style Actuator***	***Rod-Style Actuator***	***Guided Rod-Style Actuator***	***Integrated Motor Rod-Style Actuator***
Thrust up to:	7,868 lbf *[34,999 N]*	13,039 lbf *[58,001 N]*	30,000 lbf *[133,450 N]*	950 lbf *[4,226 N]*	6,875 lbf *[30,594 N]*
Speed up to:	58 in/sec *[1473 mm/sec]*	123 in/sec *[3,124 mm/sec]*	29.9 in/sec *[760 mm/sec]*	123 in/sec *[3,124 mm/sec]*	52.5 in/sec *[1,334 mm/sec]*
Stroke Length up to:	39.4 in *[1000 mm]*	60 in *[1,524 mm]*	26 in *[660 mm]*	36 in *[914 mm]*	18 in *[457 mm]*
Screw/Nut Type	Solid, Ball & Roller	Solid, Ball & Roller	Roller	Solid & Ball	Ball & Roller
	For complete information see			*or literature number:*	
Literature Number:	*2190-4000*	*3600-4609*	*2171-4000*	*3600-4609*	*2700-4000*

(Not all models deliver maximum values listed, i.e.: Maximum thrust may not be available with maximum speed)

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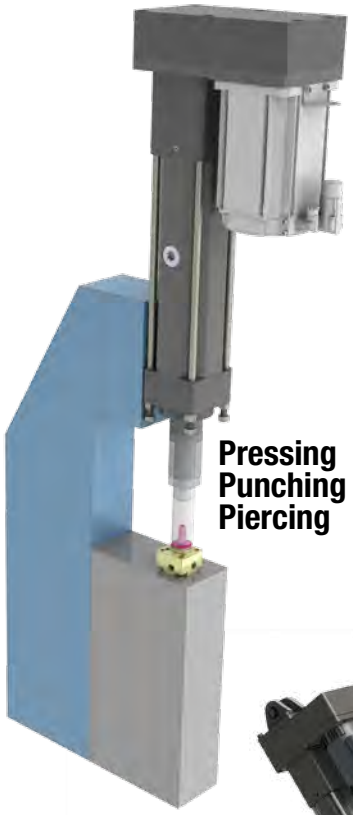
RSX Extreme Force, Hydraulic Class Electric Actuator

Applications

Volumetric pumps
Injection molding

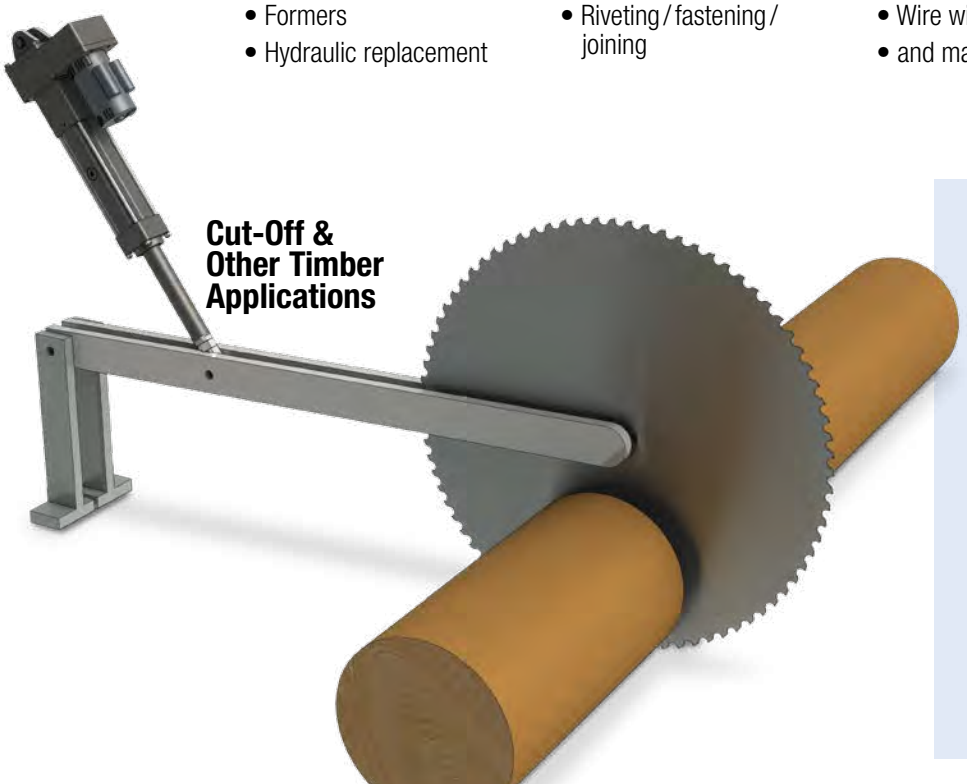
Motion simulators



Pressing
Punching
Piercing

Other Applications:

- Active Security Barrier
- Assembly machinery
- Automatic tool changers
- Automotive
- Clamping
- Converting
- Cycle testing
- Fillers
- Formers
- Hydraulic replacement
- Machine tools
- Open/close doors
- Parts clamping
- Piercing
- Precision grinders
- Product test simulations
- Pressing
- Punching
- Riveting/fastening/joining
- Sawmill equipment
- Stamping
- Tension control
- Test stands
- Tube bending
- Wave generation
- Web guidance
- Welding
- Wire winding
- and many more



Cut-Off &
Other Timber
Applications

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RSX ELECTRIC ROD-STYLE ACTUATOR

ENDURANCE TECHNOLOGY℠

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

The RSX is a extreme force electric actuator designed for rugged service, long life and is an ideal choice for replacing hydraulic cylinders.

SUPERIOR CONSTRUCTION

- Steel parts are black or clear zinc plated for corrosion resistance
- Aluminum parts are Type III hardcoat black anodized for high surface hardness

IP65 STANDARD

- Protection against dust and water spray (static)

IP67 OPTION

- Resist water ingress 1m deep for up to 30 min

HIGH POSITIONAL ACCURACY

SCREW ACCURACY	
Roller Nut	± 0.0004"/ft. *± 0.0102mm/300mm*

YOUR MOTOR HERE

YOU CAN CHOOSE:

- Specify the device to be installed and actuator ships with proper mounting hardware
- Specify and ship your device to Tolomatic for factory installation
- Motor or gearbox supplied and installed by Tolomatic

LUBE ACCESS PORT

- This re-lubrication system provides extended screw service life
- Convenient lubrication without disassembly
- Grease zerk fitting

FIELD REPLACEABLE CARTRIDGE

- Scraper, Wiper and U-Cup combine to prevent contaminants from entering the housing for extended life of the actuator
- One piece assembly designed for easy field replacement

THRUST TUBE

- Steel thrust tube supports extremely high force capabilities
- Salt bath nitride treatment provides excellent corrosion resistance, surface hardness and is very resistant to adherence of potential contaminants

NOSE BEARING

- Support the thrust tube and nut assembly through entire stroke length
- Unique nose bearing material allows for smooth operation

HEAVY DUTY INTERNAL BUMPER

- Bumpers protect the screw and nut assembly from damage at both ends of stroke

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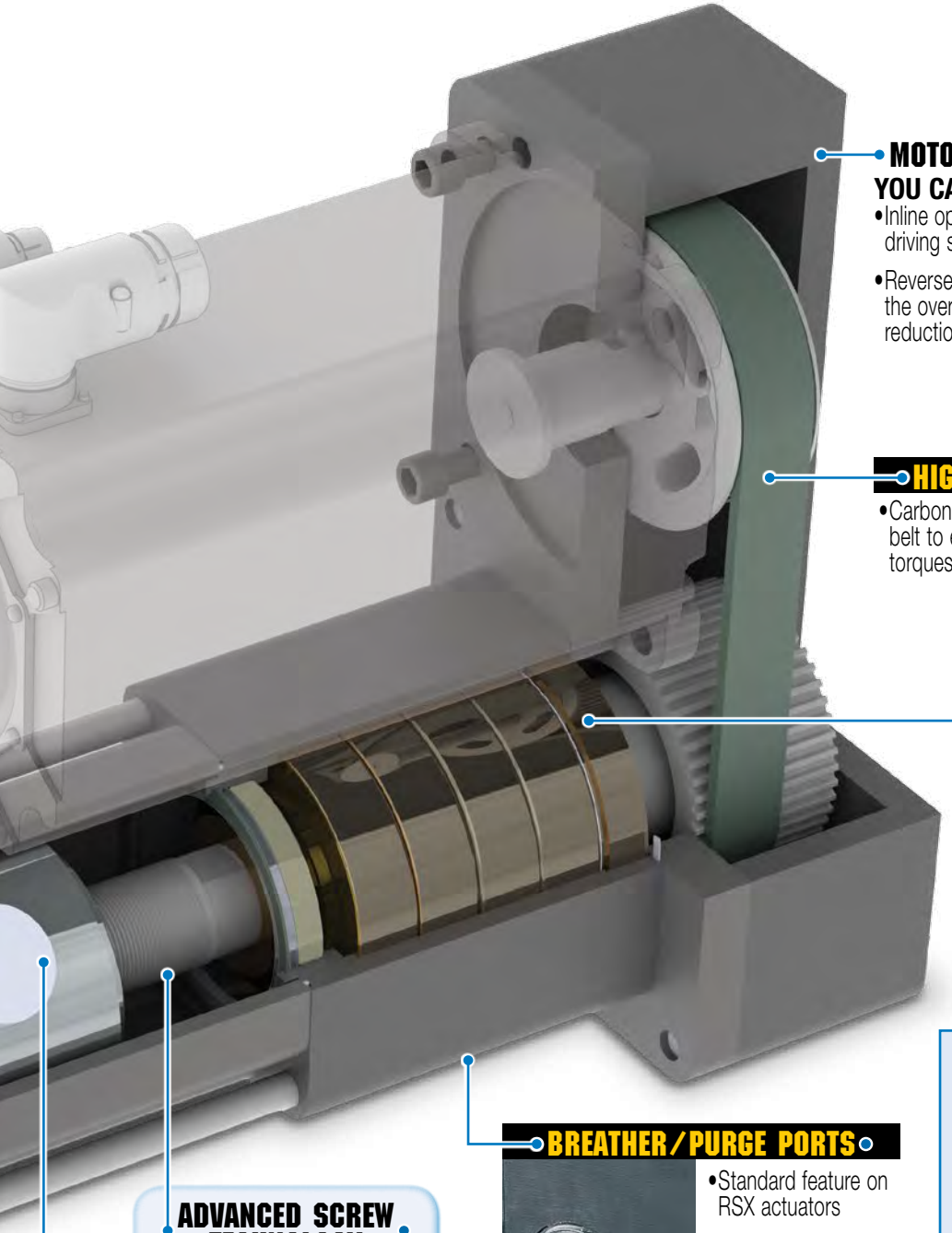
Tolomatic...MAXIMUM DURABILITY

EXCELLENCE *IN MOTION*®



MOTOR ORIENTATION YOU CAN CHOOSE:

- Inline option directly couples the driving shaft
- Reverse-parallel option minimizes the overall length and offers a belt reduction drive with a 1:1 or 2:1 ratio

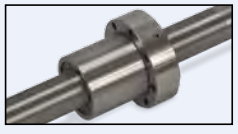
HIGH POWER TIMING BELT

- Carbon fiber tensile reinforced synchronous belt to ensure smooth transmission of high torques in a compact design.

ENHANCED HIGH THRUST BEARING

- RSX actuators come with 4 high thrust angular contact ball bearings

ADVANCED SCREW TECHNOLOGY



- Roller nuts provide the highest thrust and life ratings available

BREATHER / PURGE PORTS

- Standard feature on RSX actuators
- As seen in this view, located on both the bottom and the opposite side of the actuator
- Use as **Breather Port:** allows air flow into the interior of the actuator. Prevents additional load on the motor caused by air buildup due to fast cycling of the RSX. Use as **Purge Port:** positive pressure with air lines and filters insure contaminants *(which could potentially shorten the actuator life)* do not enter the interior of the actuator.

MOUNTING OPTIONS

- Front Flange
- Extended Tie Rods
- Trunnion
- Mounting Plates
- Rear Clevis

ROD END OPTIONS

- Rod Clevis
- Threaded Rod (standard)
- Extended Rod

SENSORS

- Tie Rod Clip

INTERNAL ANTI-ROTATE

- Bearings that convert rotary motion to linear motion also serve as an anti-rotate mechanism throughout the entire stroke

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RSX Electric Rod-Style Actuator

ACTUATOR SIZING

Specifications

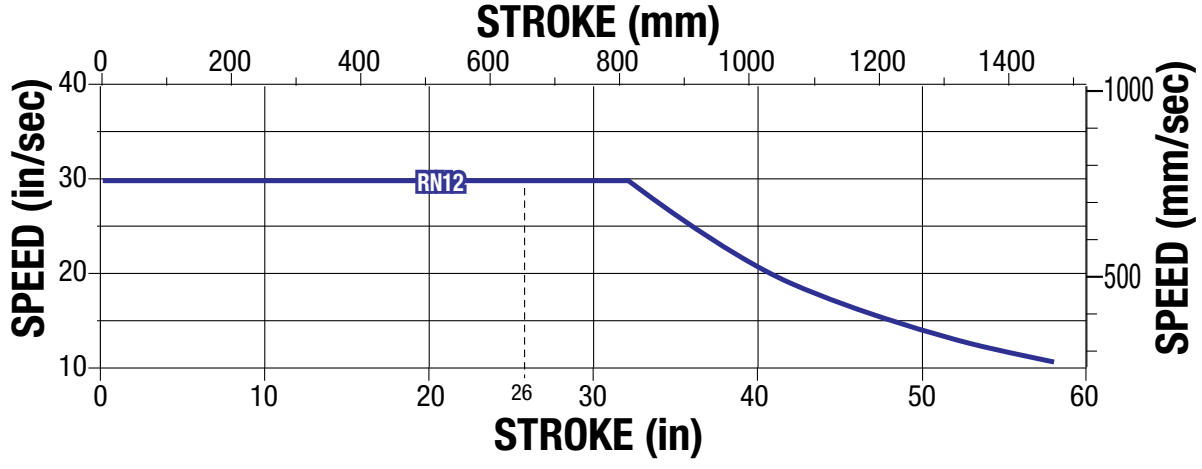
PERFORMANCE

RSX SIZE	*MAX. STROKE LMI	*MAX. STROKE RP	SCREW CODE	SCREW LEAD	LEAD ACCURACY	BACKLASH	MAX. THRUST	MAX. SPEED	DYNAMIC LOAD RATING	DYNAMIC TORQUE TO OVERCOME FRICTION
	mm	*mm*		*mm/rev*	*mm/300mm*	*mm*	*kN*	*mm/sec*	*kN*	*N-m*
096	*660.4*	*641.4*	*RN12*	*12.00*	*0.01*	*0.030*	*133.45*	*759*	*269.3*	*6.21*
	in	in		turns/in	in/ft	in	lbf	in/sec	lbf	lbf-in
	26.00	25.25	RN12	2.12	0.0004	0.0012	30,000	29.9	60,530	55.0

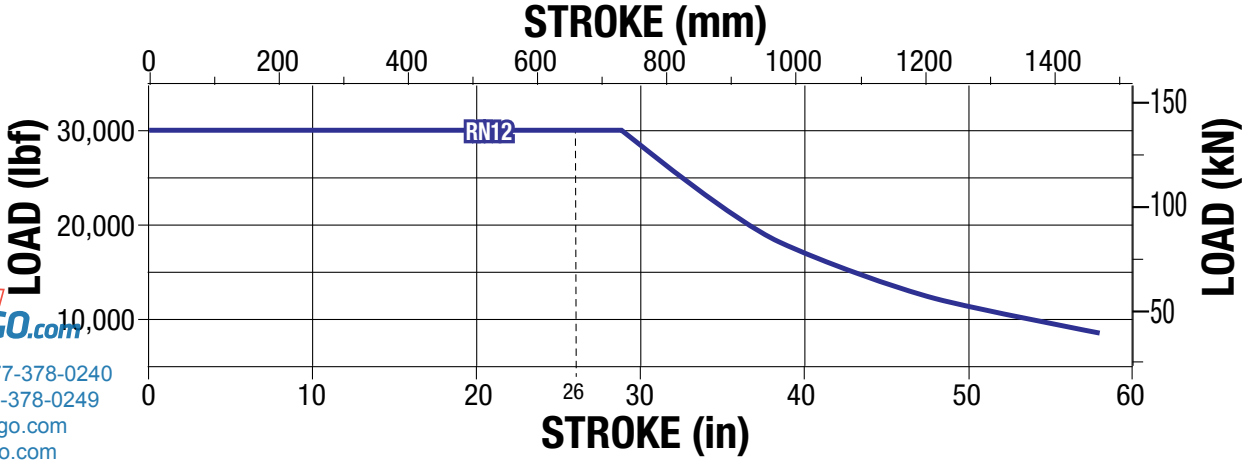
*Consult Tolomatic for longer strokes. Trunnion option reduces max. stroke by 72.4 mm (2.85")

		RSX SIZE	SCREW CODE		LMI	RP1 ST	RP1 HT	RP2 ST	RP2 HT
INERTIA	BASE ACTUATOR	096	*RN12*	*kg-m² x 10⁻⁴*	*192.902*	*164.476*	*238.786*	*86.861*	*86.004*
		096	RN12	lb-in²	65.92	56.21	81.60	29.68	29.39
	PER IN	096	*RN12*	*kg-m² x 10⁻⁴*	*1.039*				
	PER 25.4mm	096	RN12	lb-in²	0.355				
WEIGHT	BASE ACTUATOR	096	*RN12*	*kg*	*72.03*	*71.59*	*73.01*	*72.08*	*72.58*
		096	RN12	lb	158.8	157.8	161.0	158.9	160.0
	PER 25.4mm	096	*RN12*	*kg*	*1.05*				
	PER IN	096	RN12	lb	2.31				

SIZE: 096: *CRITICAL SPEED CAPACITIES*



SIZE: 096: *SCREW BUCKLING LOAD*



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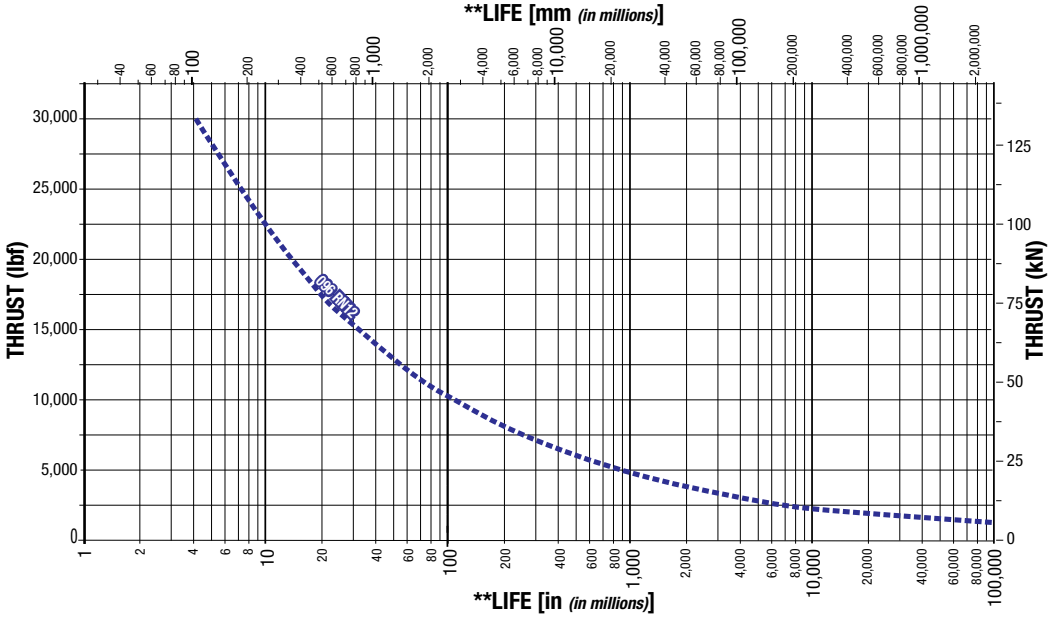
RSX Extreme Force, Hydraulic Class Electric Actuator

SIZE: **096: *ROLLER SCREW LIFE GRAPH*** ***PERFORMANCE***



*NOTE: The **L_{10}** expected life of a roller screw linear actuator is expressed as the linear travel distance that 90% of properly maintained roller screw manufactured are expected to meet or exceed. This is not a guarantee and this graph should be used for estimation purposes only.*

The underlying formula that defines this value is:

$$L_{10} = \left(\frac{C}{P_e}\right)^3 \bullet \ell \equiv$$

L_{10} Travel life in millions of units (in or mm), where:

- **C** = Dynamic load rating (lbf) or *(N)*
- **P_e** = Equivalent load (lbf) or *(N)*
  If load is constant across all movements then:
  actual load = equivalent load
- ℓ = Screw lead (in/rev) *(mm/rev)*

*Use the "**Equivalent Load**" calculation below, when the load is not constant throughout the entire stroke. In cases where there is only minor variation in loading, use greatest load for life calculations.*

Where:

$$P_e = \sqrt[3]{\frac{L_1(P_1)^3 + L_2(P_2)^3 + L_3(P_3)^3 + L_n(P_n)^3}{L}}$$

- **P_e** = Equivalent load (lbf) or *(N)*
- **P_n** = Each increment at different load (lbf) or *(N)*
- **L** = Total distanced traveled per cycle (extend + retract stroke) $[L = L_1 + L_2 + L_3 + L_n]$
- **L_n** = Each increment of stroke at different load (in) or *(mm)*

CALCULATING RMS THRUST, RMS VELOCITY AND POWER LIMIT

Roller screw actuators have two different operating regions which must be sized: RMS and peak. Peak operation is the maximum speed and/or maximum thrust the actuator that does not factor in dwells. RMS operation is the root mean square calculation of the entire motion cycle including dwells (time at rest). It is extremely important to include all dwells (time at rest) in the RMS calculation. There are instances where peak and RMS specifications can be exceeded, but must be approved by Tolomatic. RMS Thrust, RMS Velocity and Power Limit are calculated using these equations:

$$T_{RMS} = \sqrt{\frac{\sum (T_i^2 \times t_i)}{\sum (t_i)}}$$

$$V_{RMS} = \sqrt{\frac{\sum (V_i^2 \times t_i)}{\sum (t_i)}}$$

$$P = T_{RMS} \times V_{RMS}$$

(Watts) (N) (m/sec)

Where:
- T_{RMS} = RMS Thrust
- V_{RMS} = RMS Velocity
- T_i = Thrust during interval i
- $\sum$ = sum
- i = 1 to n
- V_i = Average velocity during interval i
- t_i = Time interval i
- **P** = Power limit

NOTE: Denominator represents full cycle time including dwells. Do NOT include dwell times in the numerator.

	RSX096
Power Limit	690 W

Use software at sizeit.tolomatic.com for fast, accurate actuator selection

LUBRICATION

RSA roller screw actuators require periodic re-lubrication to maintain optimal performance. Below are formulas to help determine lubrication interval. See parts sheets for formula definitions, complete instructions and examples.

STEP 1: $t_{BL} = 4500 \times (V_{RMS})^{-1.57}$

STEP 2: $K_T = K_{Co}\left(\frac{T_{PEAK}}{T_{MAX}}\right) - 0.15$

STEP 3: $t_L = t_{BL} \times K_T$

	RSX096 RN12
K_{Co}	0.21

Re-lubricate with Tolomatic Grease into the grease zerk located on the rod end.

	RSX096
Quantity	0.32 oz (9.0 g)

Where:
- t_{BL} = Basic Lubrication Interval *(hours)*
- V_{RMS} = RMS Velocity *(in/sec)*
- K_T = Thrust Correction Factor
- K_{Co} = Screw Static Load Factor
- T_{PEAK} = Actuator Peak Thrust Rating
- T_{MAX} =Maximum Cycle Thrust
- t_L = Lubrication Interval *(hours)*

In some applications oil may leak from the grease zerk. In contamination sensitive applications replace grease zerk with plug.

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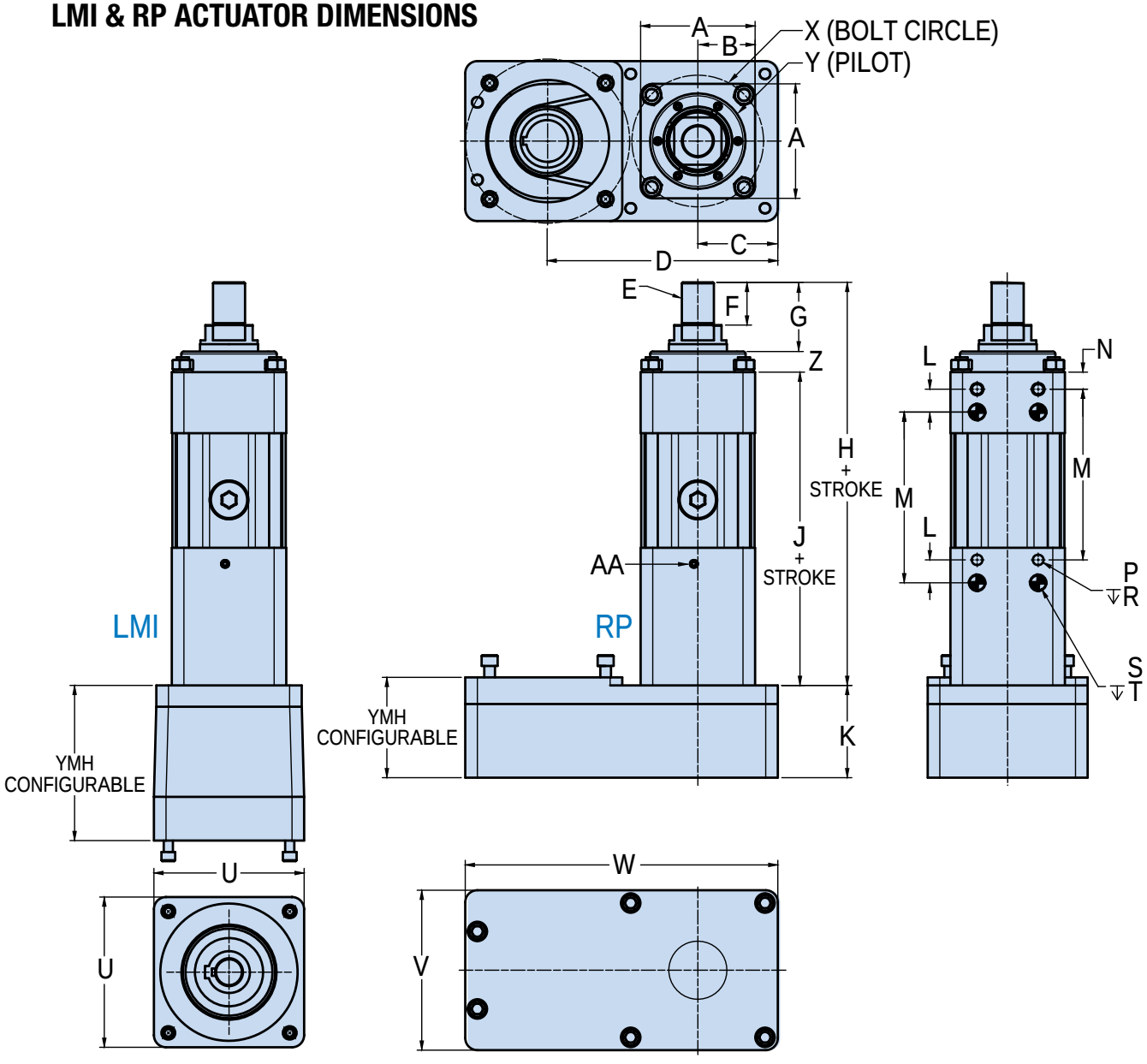
SIZE: **096**

3D CAD available at
Always use confi
to determine critical dimensions

DIMENSIONS

LMI & RP ACTUATOR DIMENSIONS



		RSX096
A	mm	150.0
	in	5.91
B	mm	75.0
	in	2.95
C	mm	104.8
	in	4.13
D	RP1 mm	304.8
	RP1 in	12.00
	RP2 mm	302.3
	RP2 in	11.90

		RSX096
E	STANDARD	M42 x 4.5-6g
	SR1 OPTION	1⅞-12 UN-2A
THREAD LENGTH		
F	mm	56.0
	in	2.20
FULL RETRACT		
G	mm	90.7
	in	3.57
H	mm	562.9
	in	22.16

		RSX096
J	mm	445.2
	in	17.53
K	mm	120.9
	in	4.76
L	mm	30.0
	in	1.18
M	mm	258.4
	in	10.17
N	mm	22.3
	in	0.88
P	M16 x 2.0-6H	
	in	-

		RSX096
R	mm	↧ 20.0 (4)
	in	↧ .79 (4)
S	mm	20.026 20.013
	in	Ø.7884 Ø.7879
T	mm	↧ 15.0 (4)
	in	↧ .59 (4)
U	mm	196.9
	in	7.75
V	mm	209.6
	in	8.25
W	mm	409.6
	in	16.13

		RSX096
X	mm	171.0
	in	6.73
Y	mm	125.00 (+0.00) (-0.03)
	in	4.920 (+0.000) (-0.001)
Z	mm	27.0
	in	1.06
AA	mm	RC 1/8 -28 X 38.1 DP (Plugged)

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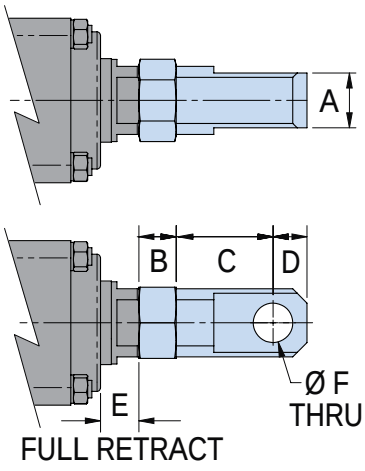
SIZE: **096**

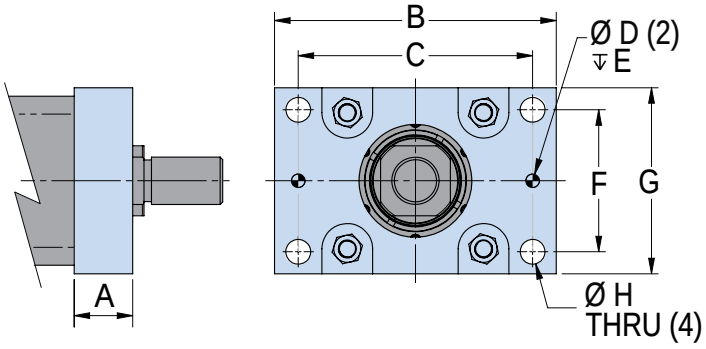
DIMENSIONS

CLEVIS OPTION (CLV)



		RSX096
A	mm	50.00 49.38
	in	1.969 1.944
B	mm	34.0
	in	1.34
C	mm	88.3
	in	3.48
D	mm	31.0
	in	1.22
E	mm	35.0
	in	1.38
F	mm	36.06 36.00
	in	1.420 1.417

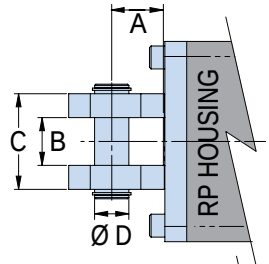
FRONT FLANGE OPTION (FFG)

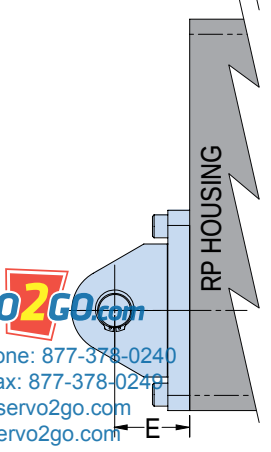


		RSX096
A	mm	52.0
	in	2.05
B	mm	250.0
	in	9.84
C	mm	208.0
	in	8.19
D	mm	12.025 12.013
	in	0.4734 0.4729

		RSX096
E	mm	12.0
	in	0.42
F	mm	126.0
	in	4.96
G	mm	165.0
	in	6.50
H	mm	22.0
	in	0.87

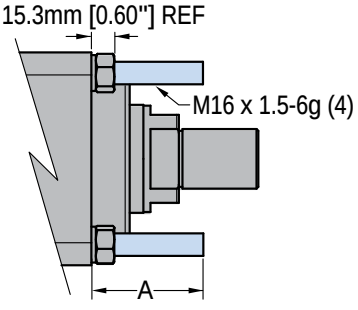
REAR CLEVIS OPTION (PCD)





		RSX096
A	mm	54.0
	in	2.13
B	mm	50.062 50.000
	in	1.9709 1.9685
C	mm	100.0
	in	3.94
D	mm	35.980 35.940
	in	1.4165 1.4150
E	mm	78.4
	in	3.09

EXTENDED TIE ROD OPTION (XT)



A = Customer Specified Length		
MIN	mm	50.0
	in	1.97
MAX	mm	100.0
	in	3.94

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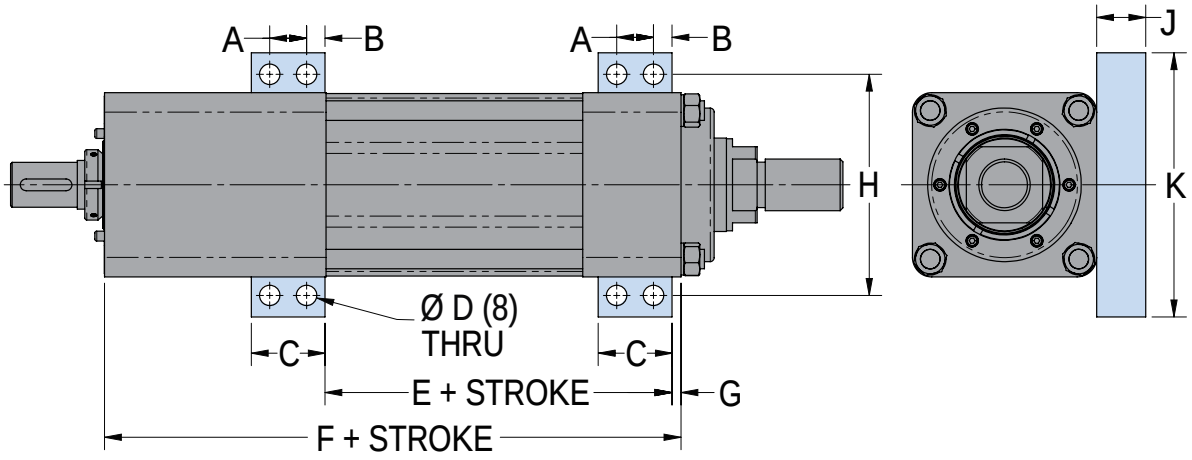
DIMENSIONS

MOUNTING PLATE OPTION (MP2) DIMENSIONS



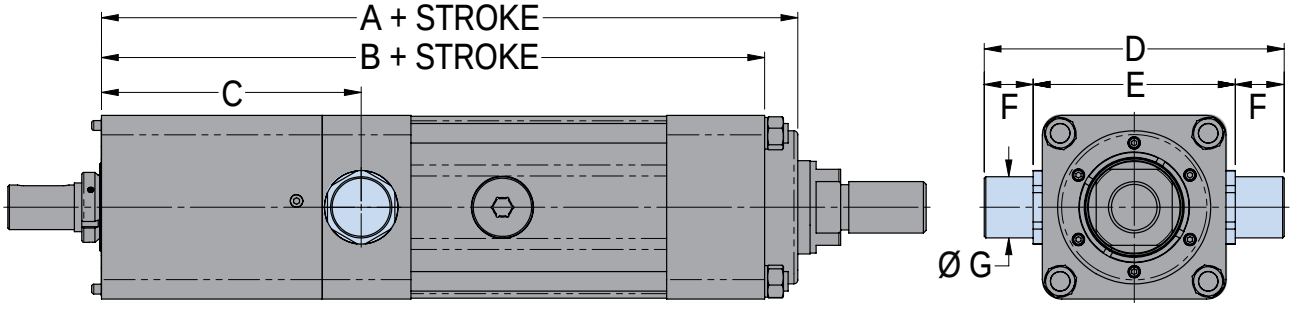
		RSX096
A	*mm*	*30.0*
	in	1.18
B	*mm*	*15.0*
	in	0.59
C	*mm*	*60.0*
	in	2.36

		RSX096
D	*mm*	*16.7*
	in	0.66
E	*mm*	*282.4*
	in	11.12
F	*mm*	*469.2*
	in	18.47

		RSX096
G	*mm*	*7.3*
	in	0.29
H	*mm*	*180.0*
	in	7.09
J	*mm*	*40.0*
	in	1.57

		RSX096
K	*mm*	*215.0*
	in	8.46

TRUNNION OPTION (TRR) DIMENSIONS



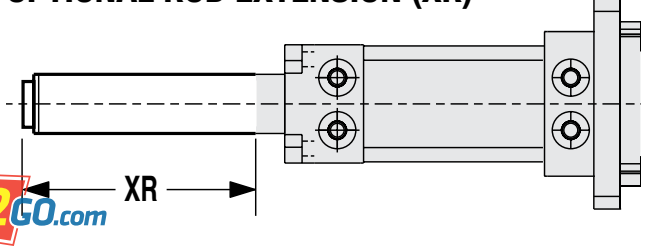
		RSX096
A	*mm*	*568.6*
	in	22.39
B	*mm*	*541.6*
	in	21.32

		RSX096
C	*mm*	*212.1*
	in	8.35
D	*mm*	*245.0*
	in	9.65

		RSX096
E	*mm*	*165.0*
	in	6.50
F	*mm*	*40.0*
	in	1.57

		RSX096
G	*mm*	*49.98* *49.94*
	in	1.968 1.966

OPTIONAL ROD EXTENSION (XR)



In ***vertical applications only,*** the thrust rod length can be extended by specifying the rod extension option. This does not increase the working stroke, only the length of the thrust rod.

NOTE: the XR dimension in the configurator string (extension + stroke) should not exceed the maximum stroke of the specified actuator. Consult Tolomatic for extensions greater than the maximum stroke length.

MAXIMUM STROKE

SIZE	RSX	*mm*	in
096	LMI	*660.4*	26.00
096	RP	*647.7*	25.50

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RSX Extreme Force, Hydraulic Class Electric Actuator

SWITCHES

RSX actuators offer a wide range of sensing choices. There are 12 switch choices: reed, solid state PNP (sourcing) or solid state NPN (sinking); in normally open or normally closed; with flying leads or quick-disconnect.

Commonly used for end-of-stroke positioning, these switches allow installation anywhere along the entire actuator length. The internal magnet is a standard feature. Switches can be installed in the field at any time.

Switches are used to send digital signals to PLC (programmable logic controller), TTL, CMOS circuit or other controller device. Switches contain reverse polarity protection. Solid state QD cables are shielded; shield should be terminated at flying lead end.

All switches are CE rated and are RoHS compliant. Switches feature bright red or yellow LED signal indicators; solid state switches also have green LED power indicators.

RoHS COMPLIANT CE

	Order Code	Lead	Switching Logic	Power LED	Signal LED	Operating Voltage	**Power Rating (Watts)	Switching Current (mA max.)	Current Consumption	Voltage Drop	Leakage Current	Temp. Range	Shock / Vibration
REED	RY	5m	SPST Normally Open	—	Red	5 - 240 AC/DC	**10.0	100mA	—	3.0 V max.	—	14 to 158°F [-10 to 70°C]	50 G / 9 G
	RK	QD*		Tolomatic 81009082									
	NY	5m	SPST Normally Closed	—	Yellow	5 - 110 AC/DC							
	NK	QD*		Tolomatic 81009084									
SOLID STATE	TY	5m	PNP (Sourcing) Normally Open	Green	Yellow	10 - 30 VDC	**3.0	100mA	20 mA @ 24V	2.0 V max.	0.05 mA max.		
	TK	QD*		Tolomatic 81009088									
	KY	5m	NPN (Sinking) Normally Open	Green	Red								
	KK	QD*		Tolomatic 81009090									
	PY	5m	PNP (Sourcing) Normally Closed	Green	Yellow								
	PK	QD*		Tolomatic 81009092									
	HY	5m	NPN (Sinking) Normally Closed	Green	Red								
	HK	QD*		Tolomatic 81009094									

*QD = Quick-disconnect Enclosure classification IEC 529 IP67 (NEMA 6) CABLES: Robotic grade, oil resistant polyurethane jacket, PVC insulation

⚠ **WARNING: Do not exceed power rating (Watt = Voltage x Amperage). Permanent damage to sensor will occur.

SWITCH INSTALLATION

Place switch bracket onto any one of the four tie rods that run the length of the extruded tube. Insert the switch with set screw and the word "Tolomatic" facing up and slide it the mating slot on the bracket. Position the bracket with the switch to the exact location desired, with the bracket tight to the surface of the extrusion, then lock the bracket securely into place by tightening the set screw with the Allen wrench provided. Then tighten the switch into the bracket with a small slotted screwdriver.

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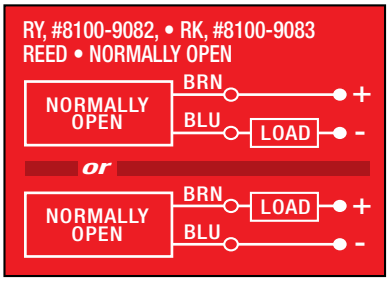
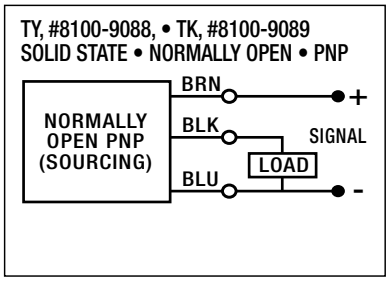
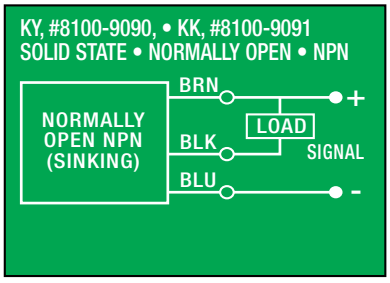
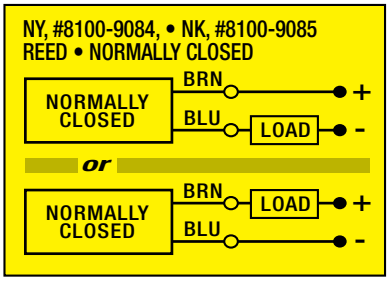
SWITCHES

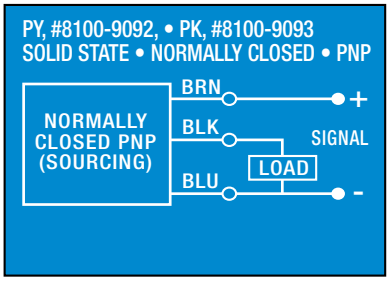
WIRING DIAGRAMS

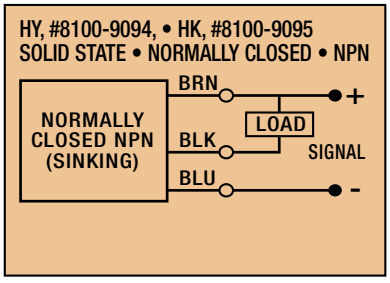


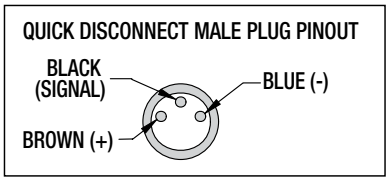


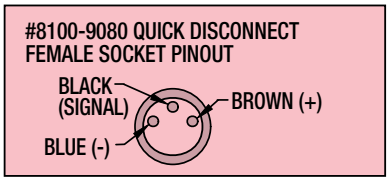






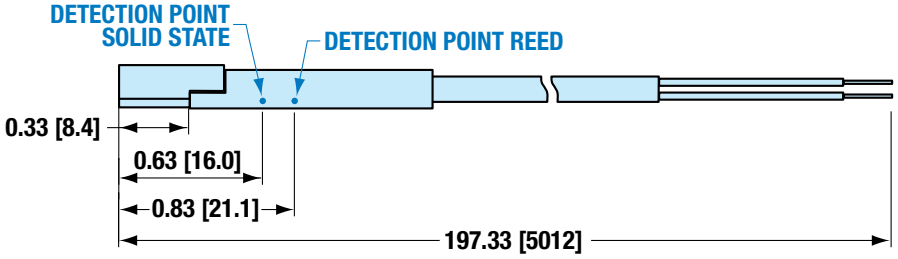




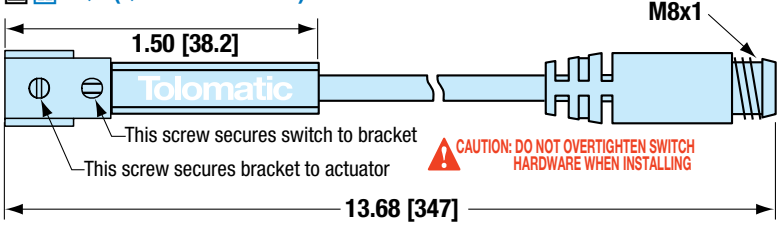


SWITCH DIMENSIONS

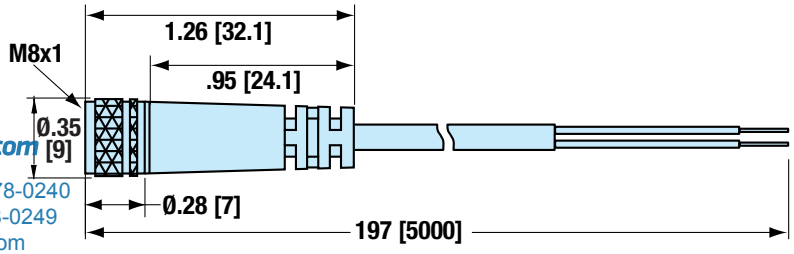
☐ Y - direct connect



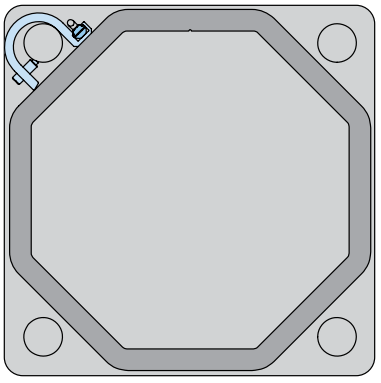
☐ K - QD (Quick-disconnect) switch



8100-9080 - QD Cable



SWITCH MOUNTING



The switch bracket and switch does not extend beyond the profile of the RSX heads.

Switch Bracket Part # 2171-1115

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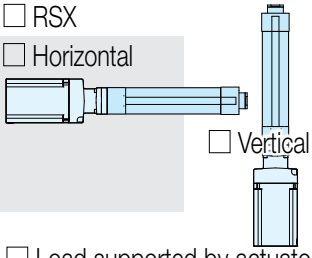
APPLICATION DATA WORKSHEET

Fill in known data. Not all information is required for all applications

ORIENTATION

☐ RSX

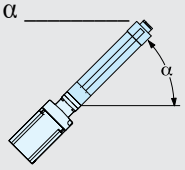
☐ Horizontal



☐ Vertical

☐ Incline °

α _____



☐ Load supported by actuator OR ☐ Load supported by other mechanism

MOVE PROFILE

EXTEND

Move Distance _____

☐ inch (US Standard) ☐ millimeters (Metric)

Move Time _____sec

Max. Speed _____

☐ in/sec ☐ mm/sec

Dwell Time After Move _____sec

RETRACT

Move Distance _____

☐ inch ☐ millimeters

Move Time _____sec

Max. Speed _____

☐ in/sec ☐ mm/sec

Dwell Time After Move _____sec

NO. OF CYCLES _____

☐ per minute ☐ per hour

HOLD POSITION?

☐ Required

☐ Not Required

☐ After Move ☐ During Power Loss

NOTE: If load or force changes during cycle use the highest numbers for calculations

EXTEND	RETRACT
LOAD _____	**LOAD** _____
☐ lb. (U.S. Standard) ☐ kg. (Metric)	☐ lb. (U.S. Standard) ☐ kg. (Metric)
FORCE _____	**FORCE** _____
☐ lb. (U.S. Standard) ☐ kg. (Metric)	☐ lb. (U.S. Standard) ☐ kg. (Metric)

STROKE LENGTH _____

☐ inch (US Standard) ☐ millimeters (Metric)

PRECISION

Repeatability _____

☐ inch ☐ millimeters

OPERATING ENVIRONMENT

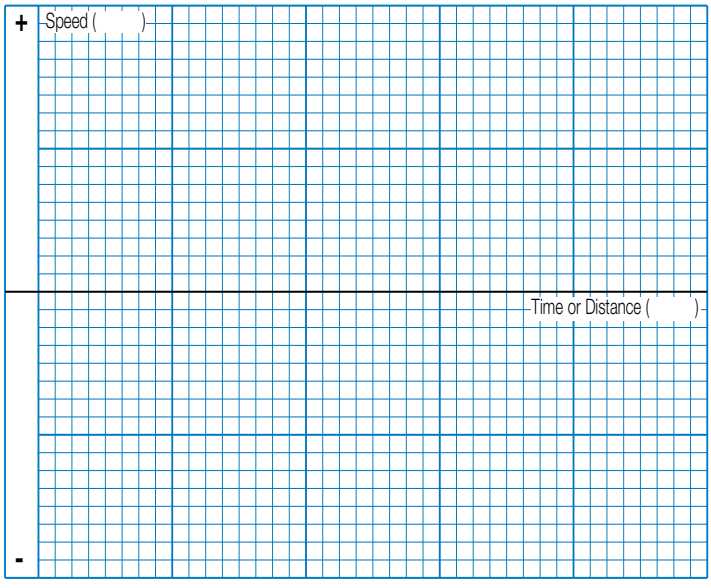
Temperature, Contamination, Water, etc.

_____

_____

_____

MOTION PROFILE



Graph your most demanding cycle, including accel/decel, velocity and dwell times. You may also want to indicate load variations and I/O changes during the cycle. Label axes with proper scale and units.

CONTACT INFORMATION

Name, Phone, Email _____

Co. Name, Etc. _____

_____

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Selection Guidelines

1 ESTABLISH MOTION PROFILE

Using the application stroke length, desired cycle time, loads and forces, establish the motion profile details including linear velocity and thrust in each of its segments.

2 SELECT ACTUATOR SIZE AND SCREW TYPE

Based on the required velocities and thrust select an actuator size and type and lead of screw drive.

3 VERIFY CRITICAL SPEED OF THE SCREW

Verify that the application's peak linear velocity does not exceed the critical speed value for the size and lead of the screw selected.

4 VERIFY AXIAL BUCKLING STRENGTH OF THE SCREW

Verify that the peak thrust does not exceed the critical buckling force for the size of the screw selected.

5 COMPARE APPLICATION'S PEAK PARAMETERS TO PEAK CAPACITY (PEAK REGION) OF SELECTED ACTUATOR

When a roller screw is selected, calculate the application's required peak thrust and peak velocity and compare to the graphs. The selection must satisfy the application's peak requirements.

6 COMPARE APPLICATION'S CONTINUOUS OPERATION PARAMETERS TO CONTINUOUS OPERATION CAPACITY (CONTINUOUS DUTY REGION) OF SELECTED ACTUATOR

When a roller screw is selected, calculate the application's continuous operation thrust and velocity and compare to the graph. The selection must satisfy the application's peak requirements.

7 CALCULATE LUBRICATION INTERVAL

Calculate the recommended lubrication interval.
See page RSX_7 for complete lubrication information.

8 TEMPERATURE CONSIDERATIONS

If the application's ambient temperature lies outside of the allowed range -40° to +70°C (-40° to +158°F), contact the factory. Note that in aggressive applications where roller screw is used, outside temperature of the actuator's body can approach 82°C (180°F), and adequate clearance to avoid overheating of other system components should be allowed.

9 ESTABLISH TOTAL TORQUE REQUIREMENTS

Calculate total system inertia, the peak and the RMS torque required from the motor to overcome internal friction, external forces and accelerate/decelerate the load.

10 SELECT A MOTOR AND A CONTROLLER

Use the obtained total torque value to select a motor and a reduction device (if required). Verify that the peak torque value is below the motor's peak torque curve, and that the continuous torque value is below the motor's continuous torque curve. Verify the minimum torque margin (15%). Verify the inertia match. Select a controller.

11 SELECT A MOTOR-ACTUATOR CONFIGURATION AND SENSORS IF REQUIRED

Select an inline or a reverse-parallel motor configuration. Select mounting and rod end options. Select position sensors (if required). 12 sensor choices include: reed, solid state PNP or NPN, all in normally open or normally closed, with flying leads or quick-disconnect couplers.

12 SELECT ROD END OPTIONS AND MOUNTING OPTIONS

Rod end options include: CLV clevis rod end. Mounting options include: TRN trunnion mount, FFG front flange mount, MP2 mounting plates, PCD clevis mount.

The above guidelines are for reference only. Use Tolomatic online sizing software for best results.

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Ordering

ACTUATOR

RSX 096 RN12 SM4500 RP1 HT1

OPTIONS

FFG CLV XR10 KK2 YM_____

MODEL & MOUNTING

RSX Rod-Style Screw-Drive Actuator,

SIZE

096

NUT/SCREW

SIZE	CODE	LEAD (mm/rev)
096	RN	12

STROKE LENGTH

SM_ _ _ Enter desired stroke length in millimeters

MAXIMUM STROKE

SIZE		RSX mm	RSX in
096	LMI	*660.4*	26.00
096	RP	*647.7*	25.50

MOTOR MOUNTING

LMI In-line motor mount
RP1 1:1 ratio, reverse parallel motor mount
RP2 2:1 ratio, reverse parallel motor mount

STANDARD OR HIGH TORQUE

ST1 Standard RS Actuator
HT1 High Torque Option

TRUNNION MOUNT

TRR Trunnion mount

NOTE: Trunnion mount is not available for field retrofit, contact Tolomatic for details

IP67

IP67 Ingress protection (Note: if not specified standard IP65 actuator will be built)

ACTUATOR MOUNTING

For all motor mounts:
FFG Front Flange Mount
MP2 Mounting Plates (2 required)
XT Extended Tie Rods (min. 50mm, max. 100mm)

For RP motor mounting only:
PCD Clevis Mount

Not all codes listed are compatible with all options. Contact Tolomatic with any questions.

ROD END

Externally threaded rod end is standard
CLV Clevis Rod End
SR1 Imperial Thread

ROD EXTENSION

XR_ _ _ Enter desired rod extension in millimeters

For vertical applications only.

NOTE: The XR extension + stroke should not exceed the max. stroke of the specified actuator. (See MAX. STROKE table) Consult Tolomatic for extensions greater than the max. stroke length.

SWITCHES

TYPE	LOGIC	NORMALLY	QUICK-DISCONNECT	CODE	QUANTITY	LEAD LENGTH
REED	SPST	Open	no	RY	After code enter quantity desired	5 meters (16.4 feet)
			yes	RK		
		Closed	no	NY		
			yes	NK		
SOLID STATE	PNP	Open	no	TY		
			yes	TK		
	NPN	Open	no	KY		
			yes	KK		
	PNP	Closed	no	PY		
			yes	PK		
	NPN	Closed	no	HY		
			yes	HK		

YOUR MOTOR HERE

YM_ _ _ _ _ _ Motor mount for non-Tolomatic motor.

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