

# TWIN RAIL STAGE STROKE CONFIGURABLE ACTUATOR

The TRS twin profile rail linear stage actuator has an enclosed design and is built to be both highly rigid, precise, and accurate. This linear stage is designed to minimize the overall machine footprint and is stroke configurable to maximize design flexibility. Available in 100, 165, & 225 sizes and capable of handling loads up to 4,320lb (1,960 kg).

## ENDURANCE TECHNOLOGY<sup>SM</sup>

A Tolomatic Design Principle

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

### STAINLESS STEEL DUST BANDS

Reduces the number of contaminants that enter the actuator interior, protecting components for reduced maintenance and increased uptime

### YOUR MOTOR HERE

Specify the motor or gearbox to be installed, with in-line or reverse parallel mounting, and the TRS actuator ships with the proper mounting hardware.

### MULTIPLE SCREW TECHNOLOGIES

#### ROLLER NUT

Roller nuts provide the highest thrust and life ratings available



#### BALL NUT

Ball nuts offer efficiency at a cost effective price



#### SCREW ACCURACY

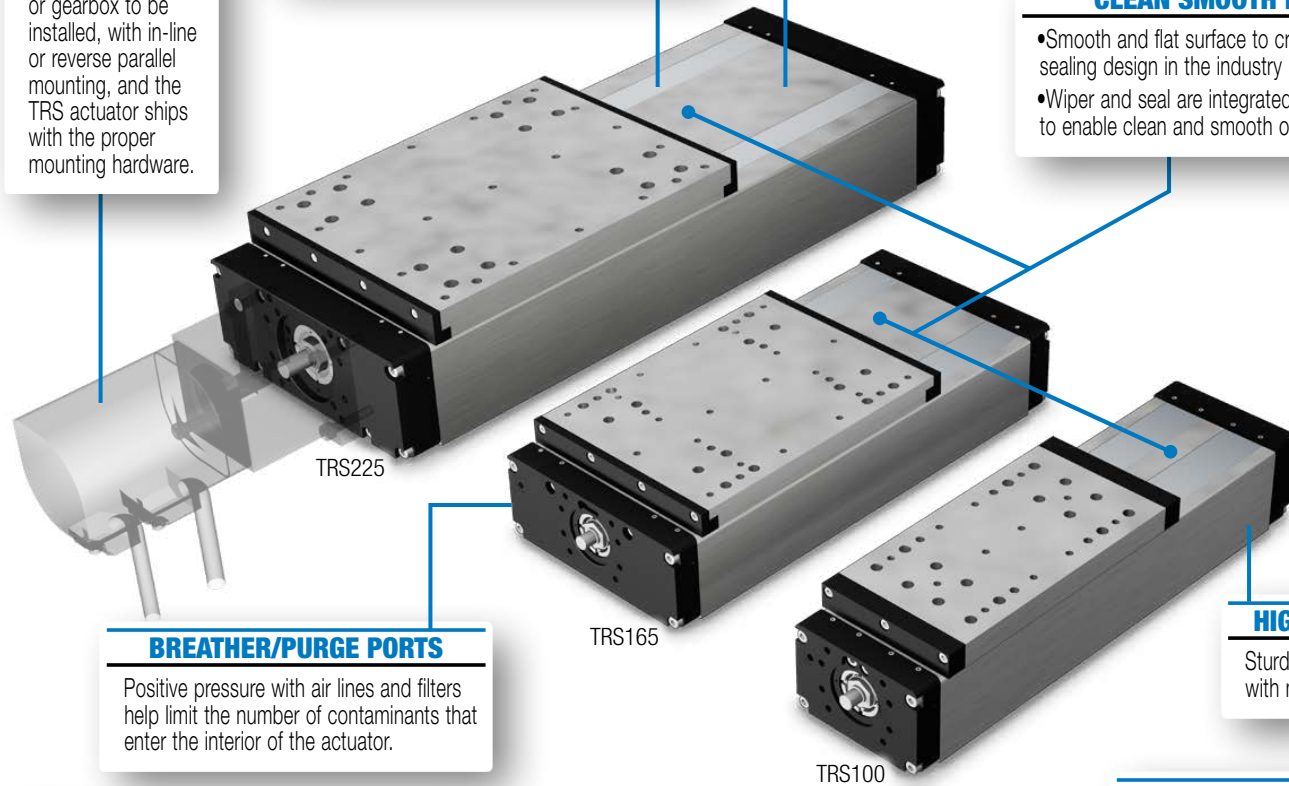
± 0.0102mm/300mm; ± 0.0004"/ft.

#### SCREW ACCURACY

± 0.051mm/300mm; ± 0.002"/ft.

### CLEAN SMOOTH DESIGN

- Smooth and flat surface to create the cleanest sealing design in the industry
- Wiper and seal are integrated in carrier design to enable clean and smooth operation



### BREATHER/PURGE PORTS

Positive pressure with air lines and filters help limit the number of contaminants that enter the interior of the actuator.

### HIGH RIGIDITY

Sturdy extruded body with machined base

### DESIGNED FOR MULTI-AXIS SYSTEMS



Options available for optimized mounting of multiple TRS units together. Either in carrier-to-carrier or carrier-to-base connections.

### OPTIONAL TOE CLAMPS

Slot and clamps for convenient and flexible mounting



## Applications:

- Machine centers
- Machine tools
- Drilling
- Cutting
- Laser positioning
- Pick & place
- Material handling systems
- X Y Z axis (2 & 3 axis configurations)
- And more

### OPTIONAL SWITCH WITH RAIL

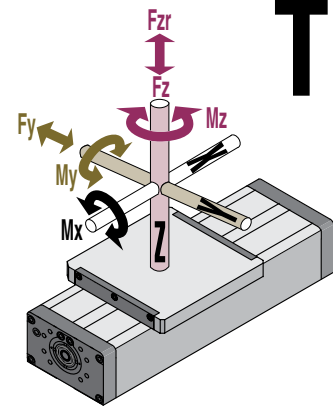
12 switch choices in normally open or normally closed; with flying leads or quick-disconnect.



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## Specifications

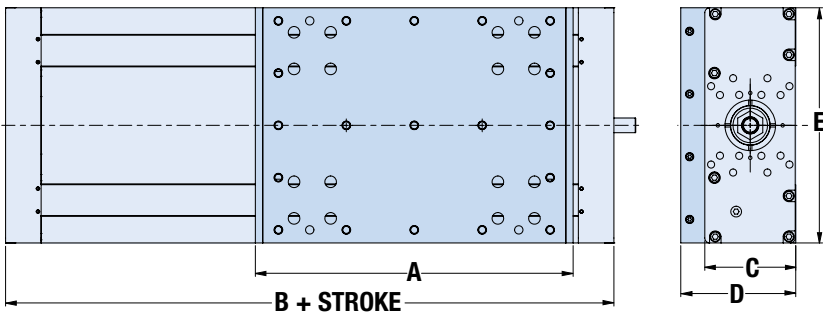
SIZE	SCREW CODE	MAX. STROKE		LEAD	LEAD ACCURACY		BACKLASH		DLR @ 1M Rev	
		mm	in		mm/rev	mm/300mm	in/ft	mm	in	N
100	BNM05	750	29.5	5.0	0.100	0.0039	0.07-0.12	0.0028-0.0050	12,000	2,698
	BNM10	750	29.5	10.0	0.052	0.0020	0.07-0.12	0.0028-0.0050	8,500	1,918
165	BNM05	1100	43.3	5.0	0.100	0.0039	0.07-0.12	0.0028-0.0050	12,000	2,698
	BNM10	1100	43.3	10.0	0.052	0.0020	0.07-0.12	0.0028-0.0050	8,500	1,918
	RN05	575	22.6	5.0	0.010	0.0004	0.03	0.0012	53,600	12,050
	RN10	575	22.6	10.0	0.010	0.0004	0.03	0.0012	37,900	7,846
225	BN01	2200	86.6	25.4	0.100	0.0039	0.07-0.12	0.0028-0.0050	10,200	2,290
	BNM05	2200	86.6	5.0	0.052	0.0039	0.07-0.12	0.0028-0.0050	15,100	3,390
	BNM10	2200	86.6	10.0	0.052	0.0039	0.07-0.12	0.0028-0.0050	15,000	3,370
	RN04	819	32.3	4.0	0.010	0.0004	0.03	0.0012	67,200	15,100
	RN05	819	32.3	5.0	0.010	0.0004	0.03	0.0012	73,300	16,500
	RN10	819	32.3	10.0	0.010	0.0004	0.03	0.0012	76,400	17,200



# TRS

TRS SIZE	MAX. BENDING MOMENTS					
	Mx		My		Mz	
	N-m	lb-in	N-m	lb-in	N-m	lb-in
100	105	932	256	2,266	231	2,047
165	294	2,604	348	3,084	315	2,785
225	1,180	10,448	1,610	14,247	1,454	12,868

## Dimensions



TRS SIZE	MAX. LOAD						AXIAL FORCE	
	Fy		Fz		Fzr			
	kN	lbf	kN	lbf	kN	lbf	kN	lbf
100	3.7	838	4.8	1,085	4.1	928	2.5	562
165	4.7	1,048	6.0	1,356	5.2	1,160	2.5	562
225	14.9	4,320	19.2	3,352	16.5	3,712	12.6	2,828

SIZE	A	B	C	D	E
	mm	mm	mm	mm	mm
100	220.0	272.0	67.0	81.8	100.0
165	230.0	282.0	67.0	81.8	165.0
225	304.0	382.0	87.0	110.0	225.0

SIZE	A	B	C	D	E
	in	in	in	in	in
100	8.66	10.70	2.64	3.22	3.94
165	9.06	11.10	2.64	3.22	6.50
225	11.97	15.04	3.43	4.33	8.86

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MADE IN U.S.A.

# Tolomatic™

EXCELLENCE IN MOTION

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CERTIFIED BY DNV  
= ISO 9001 =  
Certified site: Hamel, MN

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