

T SERIES ROD-STYLE

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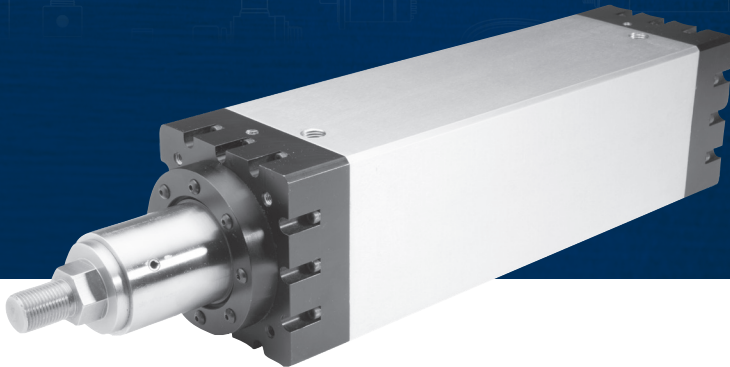
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T SERIES ROD- STYLE ACTUATORS

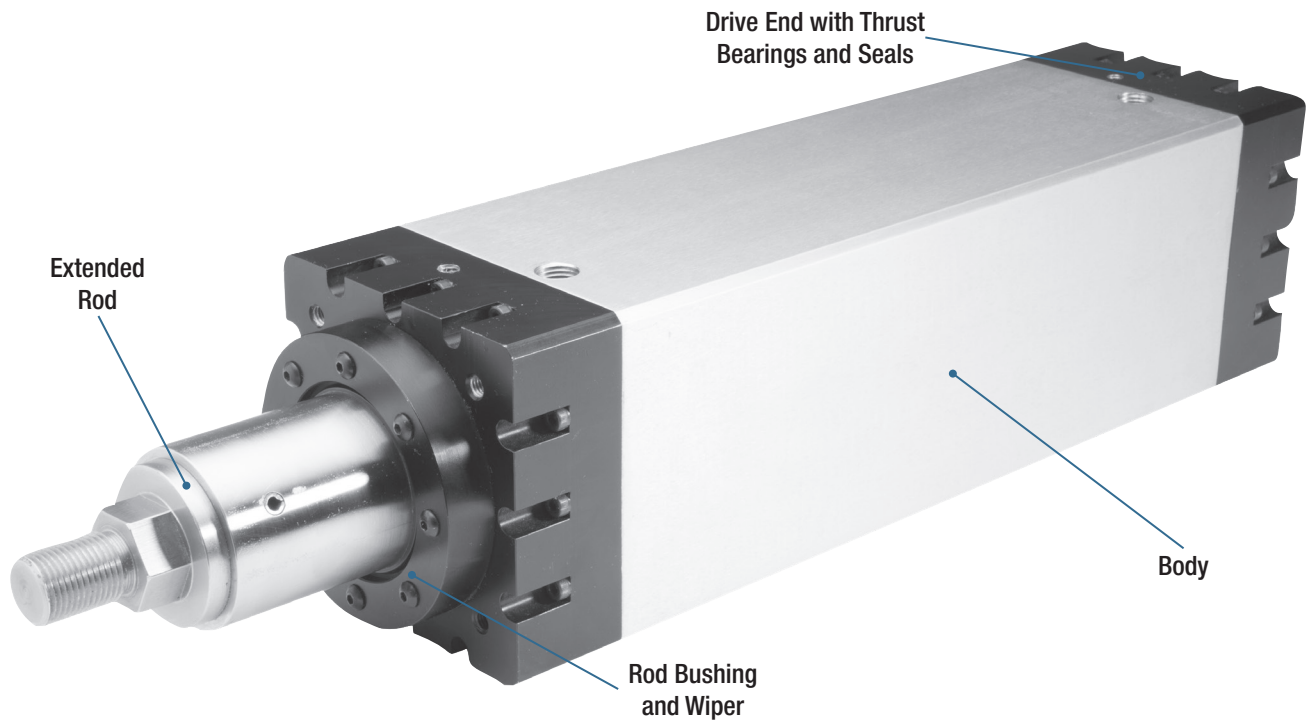


Bimba's T Series rod-style actuators are heavy duty ballscrew driven actuators intended to move your heaviest loads with great precision, ease, and flexibility. In cases where an application calls for a hydraulic replacement or an electric rod solution that matches or exceeds that of a comparable pneumatic cylinder solution, the T Series provides the performance that allows you to select the best solution for your particular application.

With five types within the T Series family to select from, you are sure to find a solution. Each increasing series type provides more thrust, dynamic load, end bearing, and screw capacity than its predecessor, leading to an ideal solution to application match. With various configurations, including inline, reverse parallel, stepper motor, servo motor, your motor, or no motor, you are free to select a control scheme that best suits your requirements.

For those situations where a non-guided load is the object to move, Bimba offers a thruster block and guide rod option for the T Series that is specifically designed and intended for non-guided loads in which the thruster block and guide rod absorb the high side loads created in these scenarios.

PRODUCT FEATURES



The T Series electric actuator is a rod-style actuator with extreme thrust capability. The ballscrew design is available in 5-25mm leads and in long lengths, up to 5ft. When a workhorse electric actuator with pneumatic and even hydraulic cylinder-like performance characteristics is needed, the Bimba T Series can meet the need with the added luxury of clean, high precision motion.

FEATURES AND BENEFITS

Precision Rolled Ballscrew

- Ideal for high thrust applications
- Ideal for high-accuracy applications
- Precision to 0.001"
- Available with 5, 10, 16, 20, 25, 32 and 50 leads
- Optional leadscrews available
- Lengths to 1.5m (~60" or 5')

Optional Belt Reduction Drive System:

- Space saving motor to actuator belt drive
- Belt drive reduction available up to 2:1
- Adapts to your motor dimensions or a Bimba motor
- Maximize torque and thrust potential

Rod End & Mounting options:

- Rod eye
- Rod clevis
- Rod coupler
- Side lugs mount
- Pillow block mount
- Rear clevis mount
- Head end flange mount
- Drive end flange mount
- Both ends flange mount
- Trunnion mount

Optional Thruster Version:

- Add-on guide shaft and thruster block
- Ideal for side load moment loading
- Perfect for non-guided loads

The T Series rod-style actuator works by taking advantage of a high strength precision-rolled ballscrew with varying diameters and ballscrews, leading to the generation of high forces needed to move your heaviest loads. With end bearing capacity of up to 39,000 lbs, and screw dynamic loading capacity of nearly 112,000 lbs, the T Series thruster provides force on par with a large pneumatic actuator and often serves as a more flexible and cleaner hydraulic cylinder replacement.

With a non-rotating nut and extension rod, the sleek design offers smooth, effortless motion in an extruded package that looks great and performs even better. For solutions that call for motion of a non-guided load, the T Series offers an add-on thruster block and guide shaft that allows use in non-guided loading applications that are often encountered in industry.

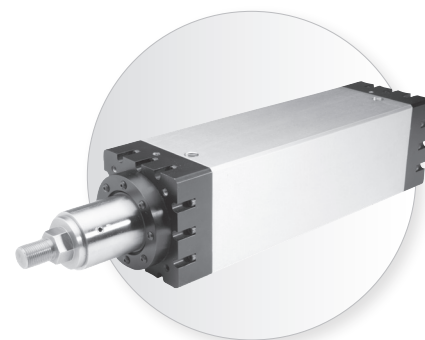
MATERIALS OF CONSTRUCTION

THRUSTERS	
Body:	Aluminum
Ends:	Aluminum
Extension Rod:	Stainless Steel
Rod Bushing:	Delrin or Bronze
Ball Nut Adapter:	Steel
Wear Plates:	Delrin
GUIDED THRUSTERS	
Body:	Aluminum
Tool Plate:	Aluminum
Guide Rod:	Hardened Steel
Bushings:	Ball Bushings or TFF

HOW IT'S USED

APPLICATION IDEAS

- Pick & Place
- Sorting
- Gating
- Loading
- Lifting
- Stacking
- Insertion
- Dispensing
- Clamping
- Parts Transfer
- Valve Control
- Machine Tool
- Pressing



TARGET APPLICATIONS

The T Series is intended for medium, heavy, and extreme duty industrial applications that require flexible, high torque motion where there is an expectation of high thrust needed to move a load. When your application calls for up to ~1.5m (~5ft) of stroke with up to 22 tons (213700 N) of dynamic loading and a speed capability in the 0.8m/sec (~32"/sec) range, the T Series offers you unbelievably robust performance to tackle your most challenging motion applications.

For applications that call for an alternative solution to a traditional large pneumatic application or a potentially messy hydraulic application, and that offers a more adaptable solution, Bimba ball-screw electric rod-style actuators provide the interchangeable solution that adapts alongside your business in an easy-to-use, long-lasting and tough electric actuator that outdoes the competition. The Bimba T Series actuator is the right solution in today's constantly changing world, meeting your application expectations today, tomorrow, and beyond.

DRIVE OPTIONS

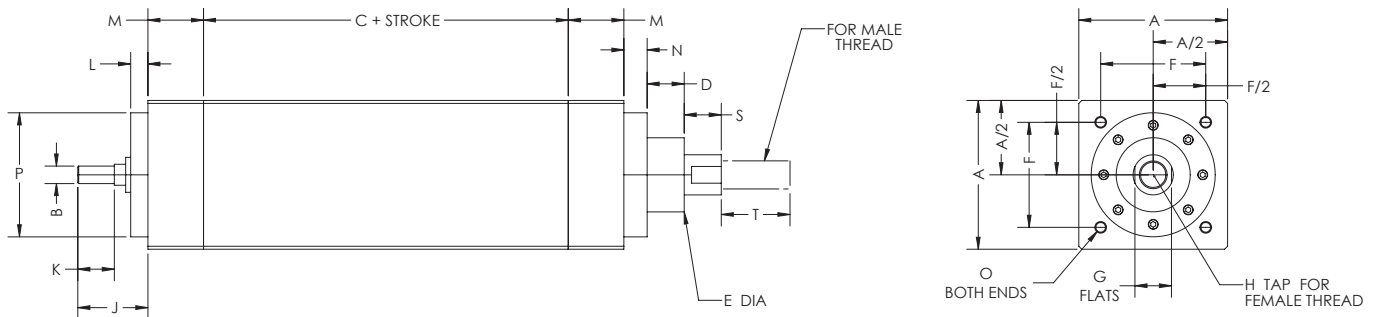
There are two drive interfaces to choose from, you may select a single standard inline shaft input or our reverse parallel belt drive in a 1, 1.5:1, or 2:1 ratio. With many Bimba stepper and servo motors available to choose from, configuring an electric actuator that best meets the needs of even your most demanding application has never been easier. You can also use your own preferred motor; Bimba likely has a motor mount configuration that will fit. If we don't, we can design a motor mount that fits your unique motor.

ADVANTAGES

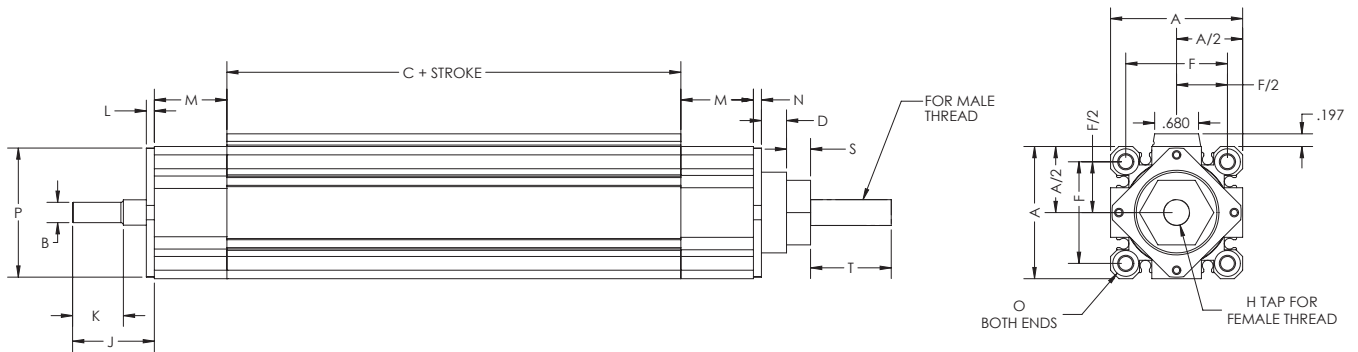
FEATURE	ADVANTAGE	BENEFIT
Precision-rolled ballscrews	Higher accuracy and repeatability	Realize unmatched positional performance leading to reliable output, less waste, and increased throughput
Oversized thrust bearing	Provides maximum amounts of screw capacity in excess of 48,000 lbs.	Offers extreme thrust capability to solve nearly any loading need and provides an alternative to larger bore pneumatics and hydraulics

DIMENSIONS

Key specification information for T Series actuators is given below. For additional specification information, contact Bimba Customer Service at cs@bimba.com, or 800.44.BIMBA (800.442.4622).



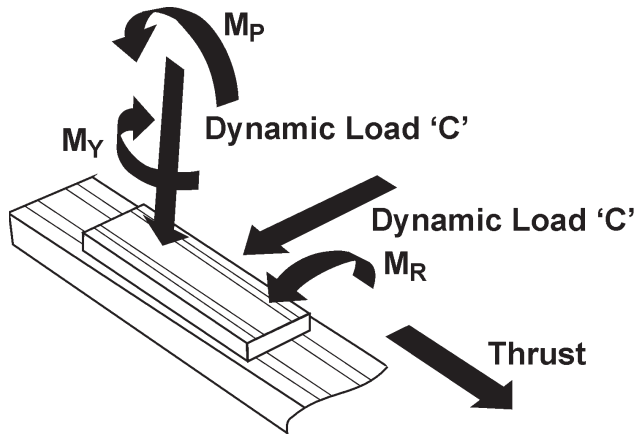
		DIMENSIONS																
ACTUATOR	SCREW DIAMETER	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	S	T
T60	15	63.5	10	76.2	15	38.1	54	19	M16	40	20	12.7	25.4	9.5	M5	63.5	19	19
	20		12	102						48	25							
	25		15	76.2						50	25							
T80	25	102	15	76.2	25.4	50.8	70	25	M20	60	25	11.8	38.1	15.9	M6	85	19.1	25.4
	32		20	102						62.3	36							
	40		25	112						80	42							
T130	40	127	25	112	31	70	90	30	M24	83.8	42	19.1	38.1	19.1	M8	105	31.8	38.1
	50		35	130						102	60							
T150	63	153	45	160	31	102	110	55	M36	140	80	28.6	44.5	48.6	M10	135	38.1	45
T200	80	203	60	215	31	127	150	63.5	M50	150	100	25.4	63.5	30	M12	171	50.8	50.8



		DIMENSIONS																
ACTUATOR	SCREW DIAMETER	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	S	T
T30	.5	52	8	102.5	2.8	29.3	98.7	10	M10	32.2	20	3.2	28.5	3.2	M5	50.8	31.8	19

HOW TO SPECIFY

SPECIFICATIONS



LINEAR ACTUATOR	EXTRUSION	
	MOMENT OF INERTIA	
	IX (CM4)	IY (CM4)
T60	70	70
T80	342	342
T130	950	950
T150	2100	2100
T200	5620	5620

SCREW DIAMETER	THRUSTER SIZES	SCREW LEAD	END BEARING CAPACITY		SCREW CAPACITY	
			DYNAMIC LOAD N (lbs)	STATIC LOAD N (lbs)	DYNAMIC LOAD N (lbs)	STATIC LOAD N (lbs)
1/2"	T30	0.20"	3541 (796)	3069 (690)	2669 (600)	13,233 (2975)
15	T60	5mm	12,400 (2790)	7650 (1720)	5100 (1146)	10,500 (2360)
		10mm			5100 (1146)	10,500 (2360)
		16mm			4300 (966)	10,200 (2293)
20	T60	5mm	21,200 (4770)	13,400 (3010)	6200 (1394)	14,700 (3305)
		10mm			10,600 (2383)	22,700 (5103)
		20mm			6200 (1394)	14,700 (3305)
	T80	50mm			13,000 (2923)	24,600 (5530)
25	T60, T80	5mm	26,000 (5850)	16,600 (3730)	6600 (1484)	18,700 (4204)
		10mm			27,500 (6182)	76,300 (17,152)
		25mm			9300 (2090)	22,700 (5103)
	T80	50mm			15,400 (3463)	31,700 (7126)
32	T80	5mm	42000 (19,050)	31,000 (6970)	23,300 (5238)	45,500 (10,229)
		10mm			33,800 (7599)	52,000 (11,690)
	T130	20mm			47,200 (10,611)	83,200 (18,704)
		32mm			18,000 (4047)	34,700 (7800)
		40mm			14,900 (3350)	32,400 (7284)
40	T80, T130	5mm	55,900 (12,600)	42,500 (9550)	26,300 (5912)	59,200 (13,309)
		10mm			78,600 (17,670)	136,200 (30,619)
		20mm			52,200 (11,735)	103,600 (23,290)
	T130	40mm			59,700 (13,421)	108,900 (24,482)
50	T130	10mm	79,300 (17,800)	65,500 (14,700)	97,800 (21,986)	213,200 (47,929)
	T150	20mm			78,800 (17,715)	188,700 (42,421)
63	T150	10mm	119,000 (26,800)	102,000 (22,900)	11,185 (24,662)	28,100 (61,957)
	T200	20mm			103,100 (23,178)	270,800 (60,878)
80	T200	10mm	174,000 (39,100)	160,000 (36,000)	121,900 (27,404)	375,000 (84,303)
		20mm			213,700 (48,044)	496,000 (111,511)

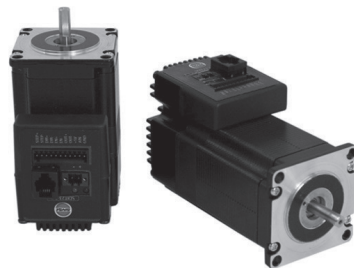
MOTORS AND DRIVES

Bimba motors are available to use as the rotary drive mechanism of the T Series. With a complete array of stepper and servo motors available in stock, Bimba has a motor*-drive solution that meets many demanding applications.

Configuring your motor and creating your first motion profile program is easier than ever with Bimba's intuitive and icon based IQ® suite of motion software. With our complete software suite available for free download from the Bimba website, there is no additional cost to your motion project. All Bimba stepper and servo programming software uses the same IQ® programming software, greatly reducing the learning curve. Existing programs can be easily shared or adapted among the two motor technologies.

See the Motors and Drives section for Bimba's wide selection of available motors and motor drives.

*Contact Bimba's Customer Service team for help in crossing your motor to a Bimba motor.



INTELLIMOTOR®
ITM-23Q-2-EIP-E-M12

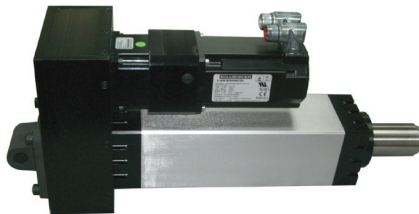


AC STEPPER MOTOR
MTR-AC23T-753-S

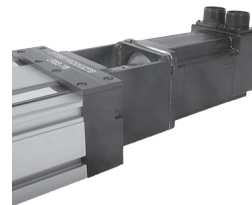
REVERSE PARALLEL MOTOR MOUNTS

In cases where space saving is critical, or in which gaining mechanical advantage via a geared drive belt pulley leads to an improved design, Bimba offers reverse parallel motor mounts. They are offered for use with nearly any Bimba motor or customer-provided motor. The option to mount in either the left or right hand position for the T Series actuator adds flexibility.

- Adapts to your motor dimensions
- Available in reduction ratios up to 2:1



T SERIES IN REVERSE PARALLEL CONFIGURATION

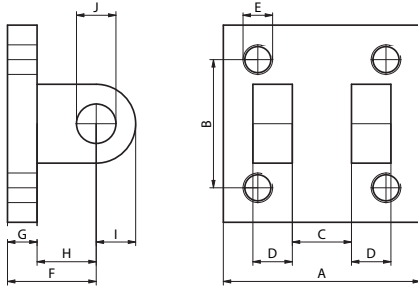


BIMBA SERVO MOTOR IN AN IN-LINE
CONFIGURATION

HOW TO ACCESSORIZE

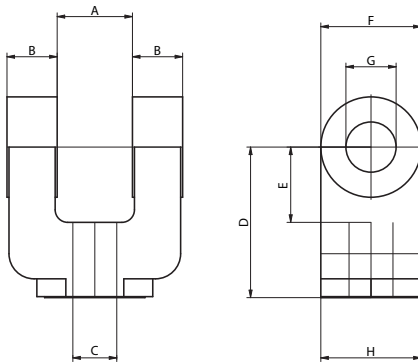
MOUNTING OPTIONS

REAR CLEVIS MOUNTING (MP2)



ACTUATORS	DIMENSIONS (MM)									
	A	B	C	D	E (IN)	F	G	H	I	J
T60	63.5	41.3	19.1	12.7	3/8-24	28.6	9.5	19.1	12.7	12.7
T80	88.9	65.1	31.8	15.9	1/2-20	47.6	15.9	31.8	19.1	19.1
T130	88.9	65.1	31.8	15.9	1/2-20	47.6	15.9	31.8	19.1	19.1
T150	114.3	82.6	38.1	19.1	5/8-18	57.2	19.1	38.1	25.4	25.4
T200	127.0	96.9	50.8	25.4	5/8-18	76.2	22.2	54.0	34.9	34.9

ROD CLEVIS MOUNTING (MP4)
(MOUNTING IS COMPATIBLE WITH MP2 CLEVIS)

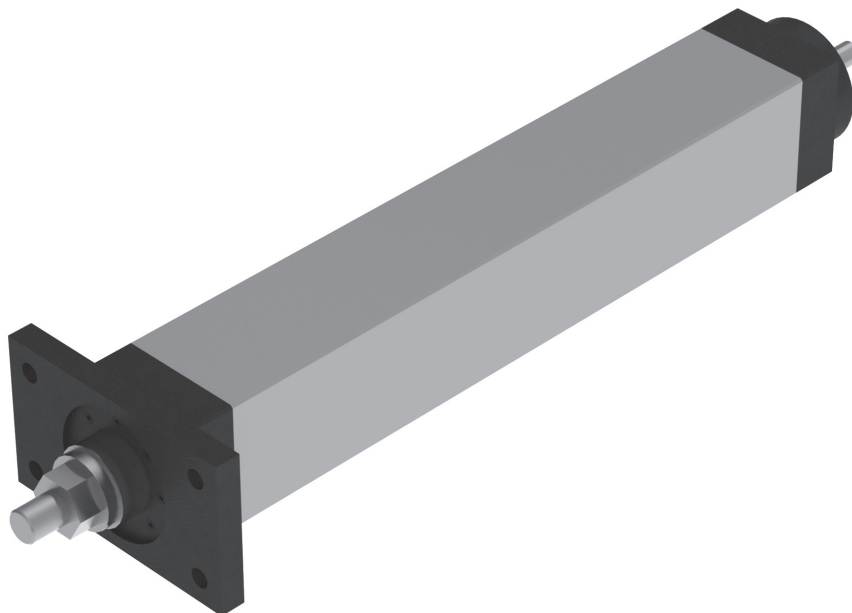
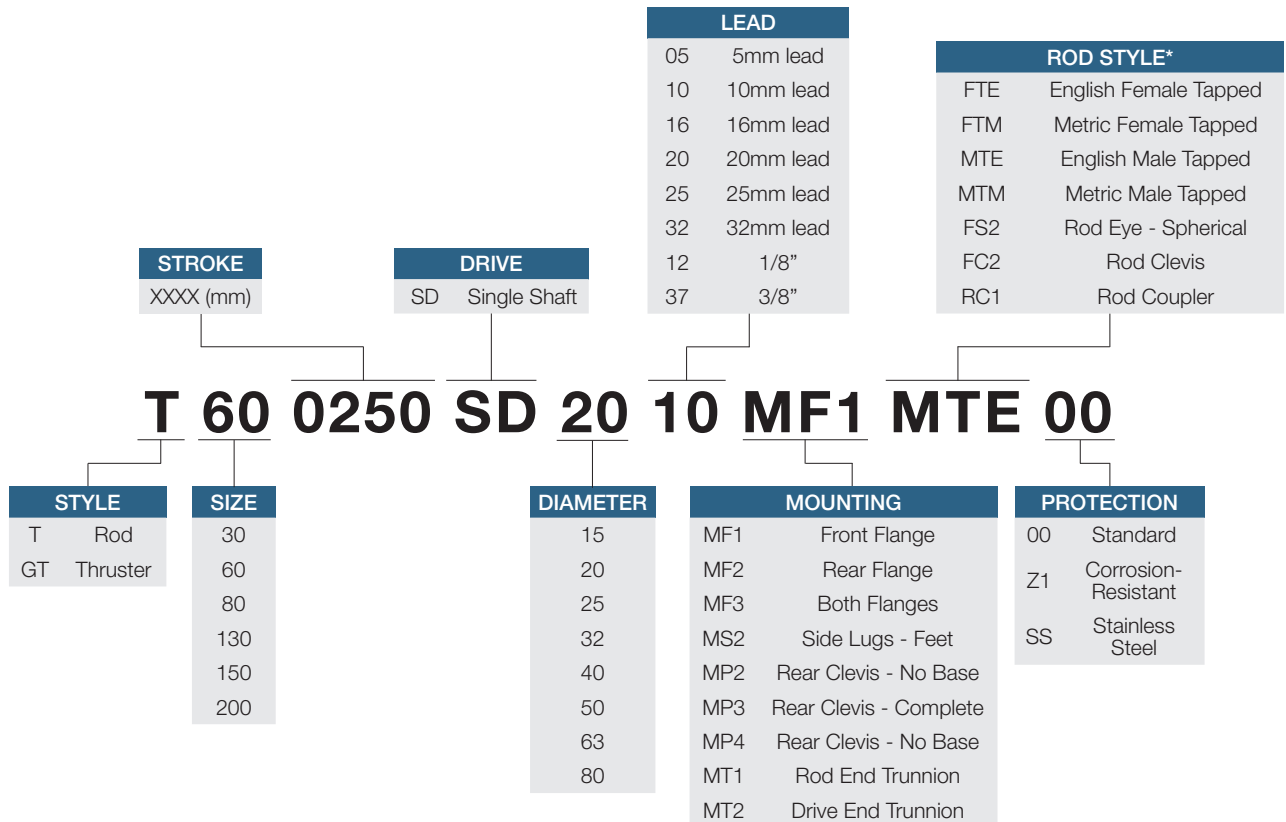


ACTUATORS	DIMENSIONS (MM)							
	A	B	C (IN)	D	E	F	G	H
T60	19.1	12.7	0.438-20	38.1	20.3	25.4	12.7	25.4
T80	19.1	12.7	0.500-20	38.1	20.3	25.4	12.7	25.4
T130	31.8	19.1	0.750-16	60.3	33.0	38.1	19.1	38.1
T150	38.1	25.4	1.000-14	79.4	38.1	50.8	25.4	50.8
T200	50.8	34.9	1.250-12	104.8	53.3	69.9	34.9	69.9

HOW TO ORDER

The model numbers of T Series rod-style actuators consist of an alphanumeric cluster designating product type, stroke length, drive type, drive location, gear ratio (optional), external scale (optional), and other optional components that together make up the complete part number to use in ordering. Use the ordering information below to build a valid part number.

An example of a basic T60 unit with a single drive shaft, 20mm ballscrew, 10mm lead, front flange mounting, English male tapped rod style, and standard protection is shown below.



NOTE: If a motor or gearbox adapter is required, please refer to the Adapters section of the Accessories chapter in this catalog.

HOW TO REPAIR

Bimba T60 - T200 electric actuators are repairable. A list of the individual components is given below that together make up the T60 - T200 electric actuators. The "XX" in each number indicates the ballscrew diameter in the How to Order sequence.

Please use the linear actuator serial number located at the drive end for all inquiries, along with the original purchase order number (if available). Describe the part required along with part number below. Contact Bimba Customer Service at 800-442-4622 (800-44-BIMBA) or e-mail cs@bimba.com.

T60 - T200 REPAIR PARTS

QUANTITY	PART DESCRIPTION	T60 PART NUMBERS	T80 PART NUMBERS	T130 PART NUMBERS	T150 PART NUMBERS	T200 PART NUMBERS
1	Front End Plate	T60-P07-XX	T80-P07-XX	T130-P07-XX	T150-P07-XX	T200-P07-XX
1	Drive End Plate	T60-P05-XX	T80-P05-XX	T130-P05-XX	T150-P05-XX	T200-P05-XX
1	Thrust Bearings	T60-P18-XX	T80-P18-XX	T130-P18-XX	T150-P18-XX	T200-P18-XX
1	Shaft Seal	T60-P16-XX	T80-P16-XX	T130-P16-XX	T150-P16-XX	T200-P16-XX
1	Lock Nut	T60-P17-XX	T80-P17-XX	T130-P17-XX	T150-P17-XX	T200-P17-XX
1	Rod Wiper	T60-P11-XX	T80-P11-XX	T130-P11-XX	T150-P11-XX	T200-P11-XX
1	Ballscrew	T60-P04-XX	T80-P04-XX	T130-P04-XX	T150-P04-XX	T200-P04-XX
1	Spacer	T60-P10-XX	T80-P10-XX	T130-P10-XX	T150-P10-XX	T200-P10-XX
1	Drive Retainer	T60-P08-XX	T80-P08-XX	T130-P08-XX	T150-P08-XX	T200-P08-XX
1	Front Retainer	T60-P09-XX	T80-P09-XX	T130-P09-XX	T150-P09-XX	T200-P09-XX
1	Front Seal Support	T60-P12-XX	T80-P12-XX	T130-P12-XX	T150-P12-XX	T200-P12-XX
1	Bushing	T60-P15-XX	T80-P15-XX	T130-P15-XX	T150-P15-XX	T200-P15-XX
1	Washer	T60-P20-XX	T80-P20-XX	T130-P20-XX	T150-P20-XX	T200-P20-XX
1	End Bolt	T60-P13-XX	T80-P13-XX	T130-P13-XX	T150-P13-XX	T200-P13-XX
1	Nut Adapter	T60-P03-XX	T80-P03-XX	T130-P03-XX	T150-P03-XX	T200-P03-XX
4	Guides	T60-P02-XX	T80-P02-XX	T130-P02-XX	T150-P02-XX	T200-P02-XX
1	Rod End	T60-P06-XX-RE	T80-P06-XX-RE	T130-P06-XX-RE	T150-P06-XX-RE	T200-P06-XX-RE
1	Extension Tube	T60-P06-XX	T80-P06-XX	T130-P06-XX	T150-P06-XX	T200-P06-XX
1	Main Housing	T60-P01-XX	T80-P01-XX	T130-P01-XX	T150-P01-XX	T200-P01-XX
1	Front Flange Mounting	T60-MF1	T80-MF1	T130-MF1	T150-MF1	T200-MF1
1	Rear Flange Mounting	T60-MF2	T80-MF2	T130-MF2	T150-MF2	T200-MF2
1	Both Flanges	T60-MF3	T80-MF3	T130-MF3	T150-MF3	T200-MF3
1	Side Lugs - Foot Mounting	T60-MS2	T80-MS2	T130-MS2	T150-MS2	T200-MS2
1	Rear Clevis - No Base	T60-MP2	T80-MP2	T130-MP2	T150-MP2	T200-MP2
1	Rear Clevis - Complete	T60-MP3	T80-MP3	T130-MP3	T150-MP3	T200-MP3
1	Rear Fork - No Base	T60-MP4	T80-MP4	T130-MP4	T150-MP4	T200-MP4
1	Rod End Trunnion	T60-MT1	T80-MT1	T130-MT1	T150-MT1	T200-MT1
1	Drive End Trunnion	T60-MT2	T80-MT2	T130-MT2	T150-MT2	T200-MT2
1	Rod Clevis	T60-FC2	T80-FC2	T130-FC2	T150-FC2	T200-FC2
1	Rod Eye -Spherical	T60-FS2	T80-FS2	T130-FS2	T150-FS2	T200-FS2
1	Rod Coupler	T60-RC1	T80-RC1	T130-RC1	T150-RC1	T200-RC1

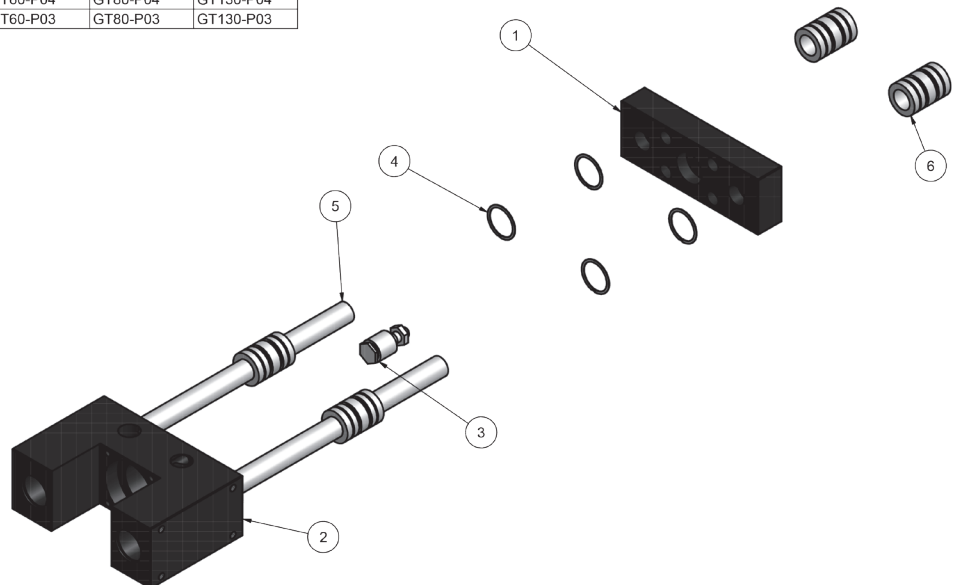
Bimba T30 electric actuators are repairable. A list of the individual components is given below that together make up the T30 electric actuator.

Please use the linear actuator serial number located at the drive end for all inquiries, along with the original purchase order number (if available). Describe the part required along with part number below. Contact Bimba Customer Service at 800-442-4622 (800-44-BIMBA) or e-mail cs@bimba.com.

T30 REPAIR PARTS

QUANTITY	PART NUMBER	PART DESCRIPTION
1	T30-P01-10	Body
1	T30-P02-10	Tube
1	T30-P03-10	Bearings (radial)
0.5	T30-P04-375	Ballscrew
1	T30-P04-10	Ballscrew
1	T30-P05-10	Screw Machining
1	T30-P06-375	Ball Nut
	T30-P06-10	Ball Nut
1	T30-P07-10	Flange (MF1)
1	T30-P08-10	Motor Mount
1	T30-P10-10	Rod Wiper
1	T30-P11-10	Bearing Retainer (brass)
2	T30-P12-10	Thrust Bearing
1	T30-P13-10	Anodizing
1	T30-P14-10	Non-Rotating Hardware
1	T30-P15-10	Motor Pulley
1	T30-P16-10	Screw Pulley
1	T30-P17-10	Timing Belt
1	T30-P18-10	Belt Housing

Parts List					
ITEM	QTY	DESCRIPTION	GT60 PARTS	GT80 PARTS	GT130 PARTS
1	1	Tooling Plate	GT60-P02	GT80-P02	GT130-P02
2	1	Housing	GT60-P01	GT80-P01	GT130-P01
3	1	Rod Aligner	GT60-P06	GT80-P06	GT130-P06
4	4	Retaining Ring	GT60-P05	GT80-P05	GT130-P05
5	2	Guide Rods	GT60-P04	GT80-P04	GT130-P04
6	4	Linear Bearing	GT60-P03	GT80-P03	GT130-P03



HOW TO CUSTOMIZE

SWITCHES

Switches add versatility to your electric motion application. They can be used to provide end of stroke limits, count strokes, or communicate positioning to an outside source. Switches can provide safety to applications as well, preventing undesirable situations like runaways to prevent damage.

To learn more about Bimba's available switch selection, refer to the Switches section in this catalog.

AIR/PURGE PORTS

Air and purge ports are essential for actuators that operate in dirty applications. In both belt- and screw-driven actuators, ports keep dust and grime from egressing, protecting the internals of the actuator. Air and purge ports are recommended for use with Bimba's air preparation products.

When using purge ports, supply dry filtered air to the actuators in order to achieve optimal protection.

PROTECTION

Bimba offers several protection options for our actuators. Our primary options are Armoloy® and stainless steel. **Armoloy®** offers additional protection against moisture and dirt. It is used to coat the steel linear rail and bearings in a Bimba actuator. Armoloy® coating can also be applied to the aluminum extrusion upon request. **Stainless steel** works in conjunction with Armoloy® coatings, providing additional protection to the end caps and carriage.

Additional coatings are available upon request.

MOTOR MOUNTING

Motor mounts allow you to mount any motor to any actuator (within the actuator's rating). They give end users the ability to use Bimba electric actuators with the motor of their choosing. Careful considerations regarding torque limitations must be made when mounting a motor the actuator is not rated for.

To request custom motor mounting options, please supply Bimba with the following information: shaft diameter, shaft length, pilot diameter, pilot depth, bolt circle, and hole size.

CUSTOMER-REQUESTED HOLES AND DOWEL PINS

Bimba can provide custom holes and dowel pins to accommodate the customer's specific tooling and mounting holes.

For further customization, contact the factory.