WARNER ELECTRIC

LINEAR PRODUCTS

A-Track Linear Actuators

Warner Electric

TEKMATIC

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- Largest array of products
- Award-winning design advantages
- Proven product performance

A-Track…
Electromechanical Linear Actuator Systems

Warner Electric has many years of experience in providing linear actuators for a variety of applications on a wide range of mobile applications such as combines, school buses, industrial sweepers; as well as in factory applications such as lift tables, die handling racks, diverters and vent positioning.

A-Track actuators are ideally suited for intermittent duty cycle applications requiring lift/lower, push/pull, positioning, sorting, opening or adjusting on both in-plant or mobile applications. The first generation of general purpose actuators were developed for remote push button control of accessory drives on garden tractors and automated farm equipment.

You will find proven design concepts incorporated on all of the A-Track industrial actuators presented in this catalog.

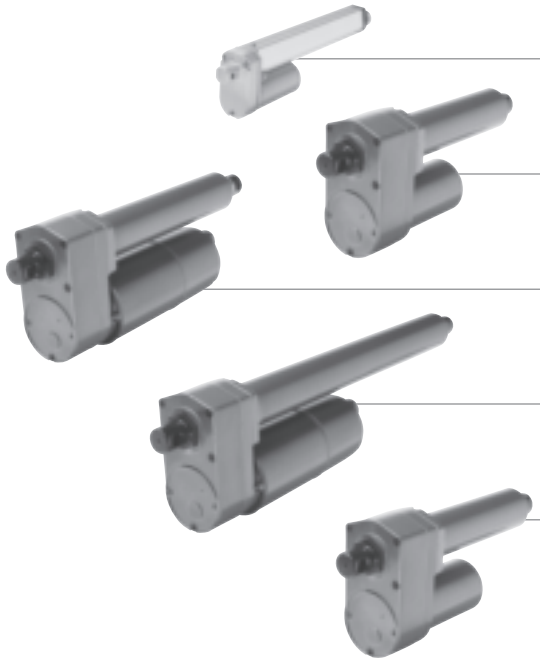


Table of Contents

A-Track | Design Features

A-Track actuators are available in load ranges from 25 to 1300 pounds, stroke lengths from 2 to 24 inches and operating voltages of 12 and 24 volt DC and 115 and 230 volt AC. Individual models offer additional features to meet a variety of design needs.

Actuator 1 Series

The A-Track Model 1 Series is a compact, light capacity design with load capacities of 25, 50, 100 and 165 pounds. Available in 12 and 24 volt DC with built in end-of-stroke limit switches with stroke lengths of 2 to 12 inches. A potentiometer to provide positional feedback is available as an option.

Actuator 2 Series

The A-Track Model 2 Series is a well protected mid range actuator for use in mobile applications or where potential moisture or ambient contamination issues exist. Available in 4 to 24 inch stroke with load capacities of 330 and 500 pounds. 12 and 24 DC motors are available as standard.

Actuator 5 Acme Series

The A-Track Model 5 Acme Series is a mid range actuator for use in indoor applications or where AC power is available. Available in 4 to 24 inch stroke with load capacities of 330 and 500 pounds. 115 and 230 volt single phase AC motors are available as standard.

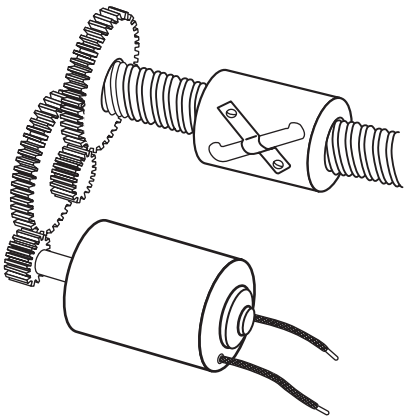
Actuator 5 Ball Screw Series

The A-Track Model 5 Ball Screw Series is a heavy-duty actuator for use in indoor applications or where AC power is available. Available in 4 to 24 inch stroke with load capacities of 500, 1000 and 1300 pounds. 115 and 230 volt single phase AC motors are available as standard.

Actuator 10 Series

The A-Track Model 10 Series is a well protected heavy-duty actuator for use in mobile equipment or where potential moisture or ambient contamination issues exist. Available in 12 and 24 volt DC motors with load ratings of 500, 750 and 1000 pounds.

Dependable Operation



Compact design

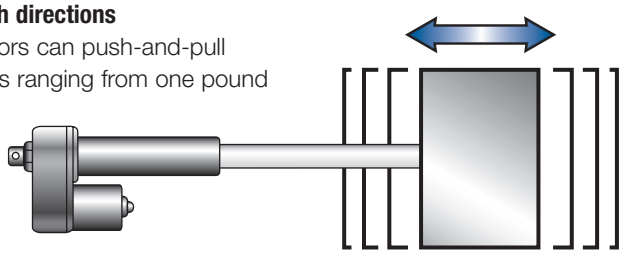
An A-Track with a four inch stroke can provide up to 1300 pounds of force capacity in a package length of under 16 inches. The A-Track 1 Series can provide up to 165 pound load capacities in a six inch stroke unit in a package length of under 12 inches.

Maintenance-free

Units are lubricated for life during assembly. There are no adjustments or maintenance required for units after they have left the factory. Consistent performance is provided for the entire life of the actuator.

Equal capacity in both directions

A-Track linear actuators can push-and-pull or lift-and-lower loads ranging from one pound to 1300 pounds up to 24 inches with equal capacity in both directions of travel.



Efficient operation

A-Track linear actuators consist of an electric motor combined with a high efficiency gear train and lead screw. This direct conversion of electrical to mechanical energy results in effective, economic linear movement. Units are completely self contained and require minimal installation hardware or wiring.

Superb load holding power

A-Track linear actuators operate loads in both tension and compression equally well. They will hold a load stationary without power in either direction. Static load holding capability will always exceed the dynamic load moving capability.

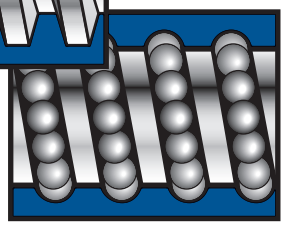
Rugged and reliable

A-Track linear actuators incorporate strong, high quality components and design to assure trouble free service. Rugged spur gearing, industrial quality lubricants and high performance motors combine to provide maximum performance and value for the product user. Units are gasketed and sealed for operation in industrial and mobile applications. Stainless steel or aluminum extension tubes prevent corrosion. Thermal overload switches are included for motor protection (except size 1).

Energy efficient

Electric control provides clean, smooth linear motion without fluids, plumbing or other expensive components. A-Track linear actuators require power only when in motion. No power is required to hold loads stationary.

Acme Screw



Ball Screw

Lead screw drive system

A-Track 1 and 2 models feature Acme Screws which will not backdrive when the power is off. A-Track 10 series actuators are equipped with highly efficient and accurate Warner Electric ball bearing screws. A load holding brake keeps the load in position when power is off. A-Track 5 models are available with either Acme or Ball Screw drives.

Overload protection

Motors used on A-Track linear actuator sizes 2, 5 and 10 incorporate thermal switches in their windings to shut the actuator motor off in case of overheating. Reset is automatic after the motor has cooled. A standard overload clutch slips if the load is too great or at the end of stroke.

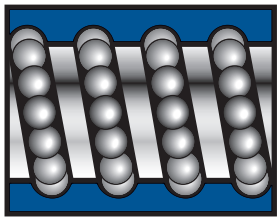
Note: Clutch is not incorporated in A-Track 1 due to size constraints.

Versatile

With their compact size, Warner Electric linear actuators can be located in confined areas, yet move loads from 25 to 1300 pounds. Their static load holding ability ensures that a load will remain in position when power is turned off. Gearing ratios create speeds that range from 1/2 to over 2 inches per second. Standard models are mounted using two parallel pins and require only simple wiring and switches. They are self-contained, lubricated for life, and designed for use where rugged and durable performance is required for almost any lift-and-lower or push-and-pull application.

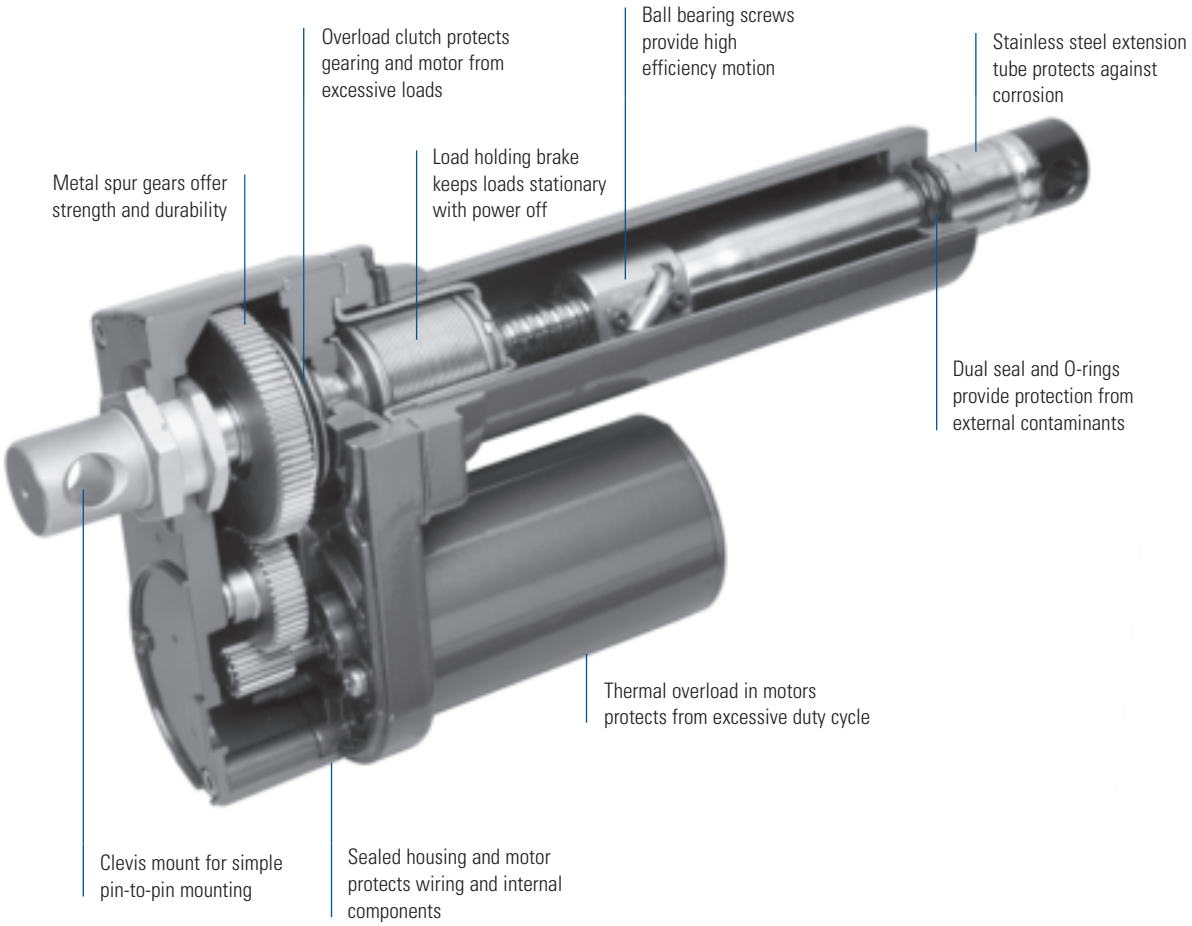
Gaskets and Seals

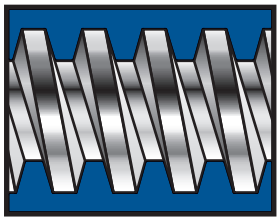
The motor and gear housing are completely gasketed with wires sealed to protect internal components from dirt, dust and moisture. AC units have seals appropriate for most indoor industrial applications. DC units have seals and O-rings appropriate for mobile applications or for indoor applications with high ambient moisture or contamination.



Ball Screw Driven Actuators...

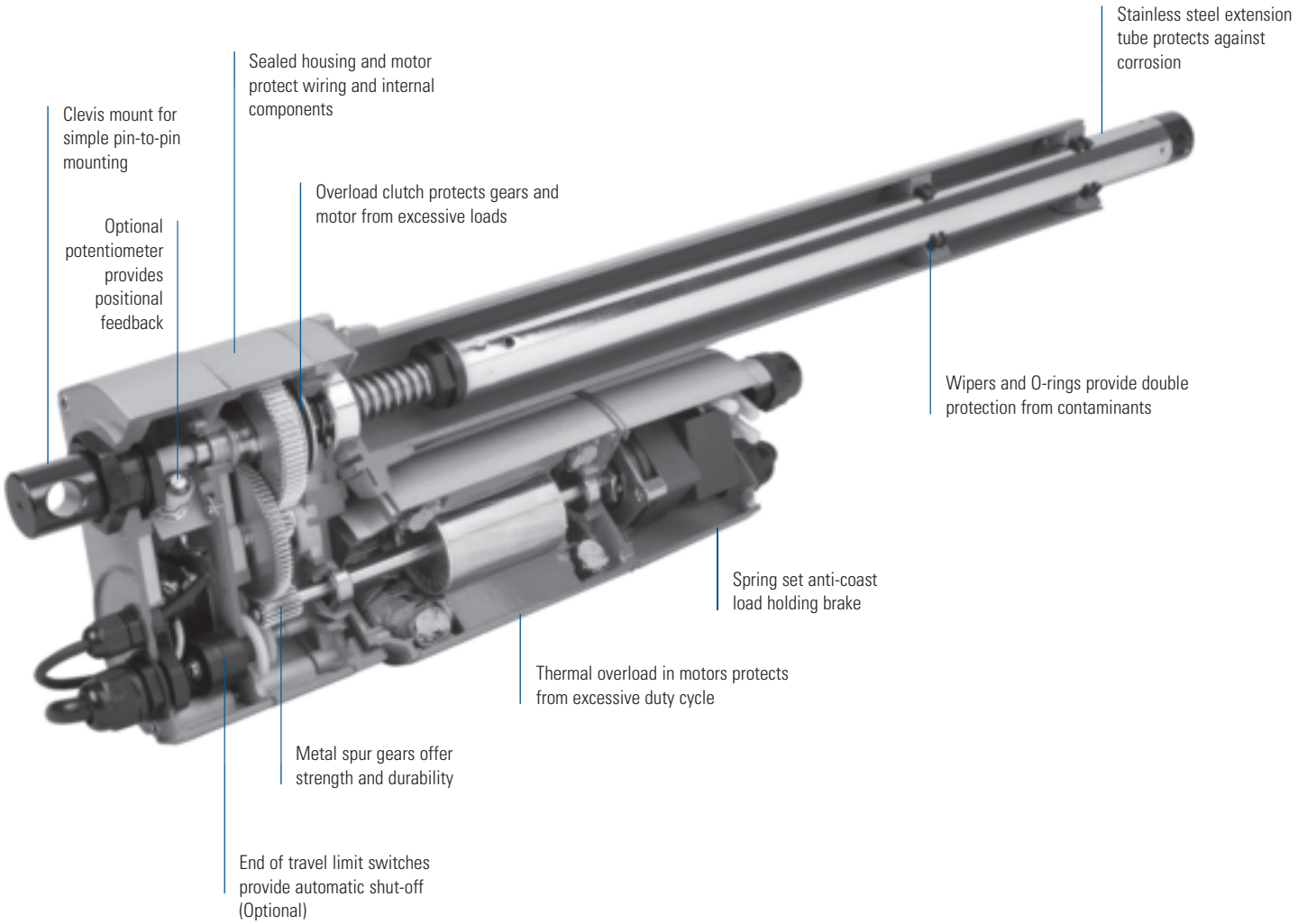
designed for industrial and commercial applications requiring high load capacities.



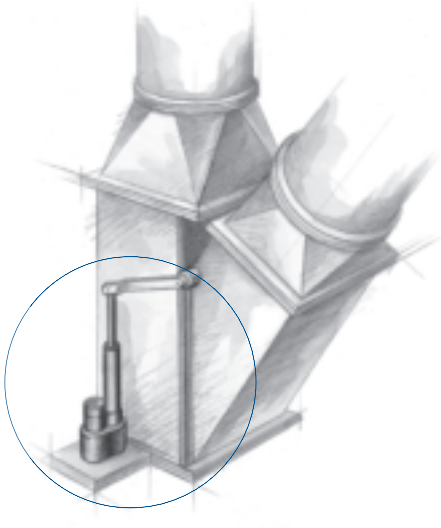


Acme Screw Driven Actuators...

designed for light to moderate duty applications.



A-Track | Applications

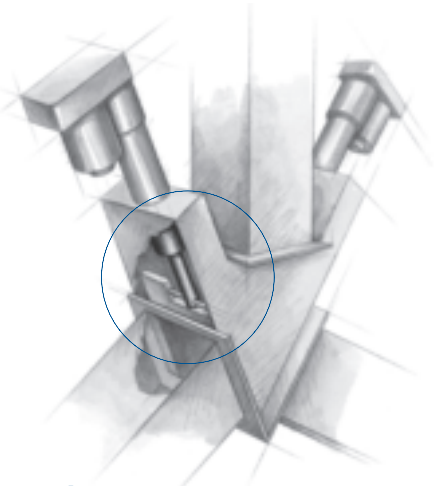


Chute Control

By extending or retracting the actuator, the gate controls the amount or mix of solid materials.

Advantages

- Remote operation without excessive plumbing
- Load holding with power off maintains chute setting without power required
- Optional feedback pot allows for accurate determination of gate/chute opening position



Diverter Valve

By extending or retracting the actuator, the diverter valve adjusts the direction of flow of solids, liquid materials or air flow.

Advantages

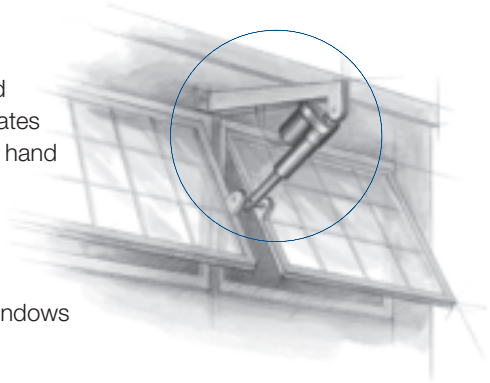
- Optional feedback allows for accurate positioning within the chute
- Seals and O-rings protect against material contamination
- Load holding with power off holds flow rate positions without providing constant power

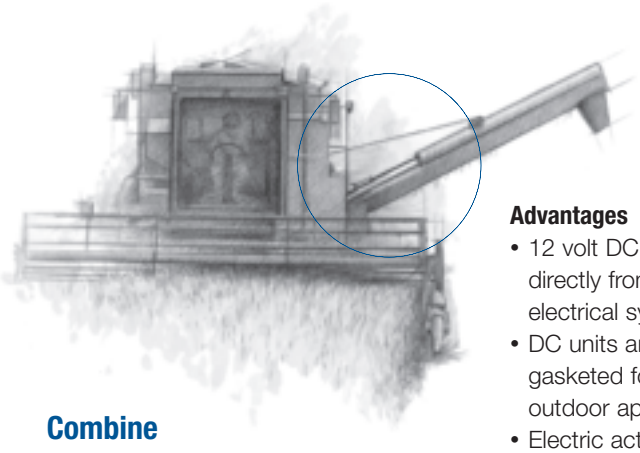
Ventilation Window

A simple push button switch and an A-Track linear actuator eliminates the use of hard to manage, long hand crank window opening devices.

Advantages

- Remote control of position
- Easy to retrofit onto existing windows
- Holds position with power off



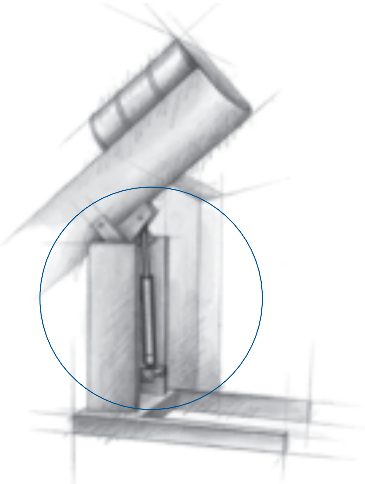


Combine

Positioning of unload auger spout can be easily achieved using simple push button control from the vehicle cab.

Advantages

- 12 volt DC units are powered directly from the vehicle electrical system
- DC units are sealed and gasketed for exposure to outdoor applications
- Electric actuators avoid potential leaks and loss of performance of hydraulic plumbing
- Load holding capability holds the load stationary with no power applied



Barrel Lift

An A-Track actuator can provide a simple and inexpensive solution for heavy or unstable load material handling. Actuators control the barrel position to allow for control of material flow.

Advantages

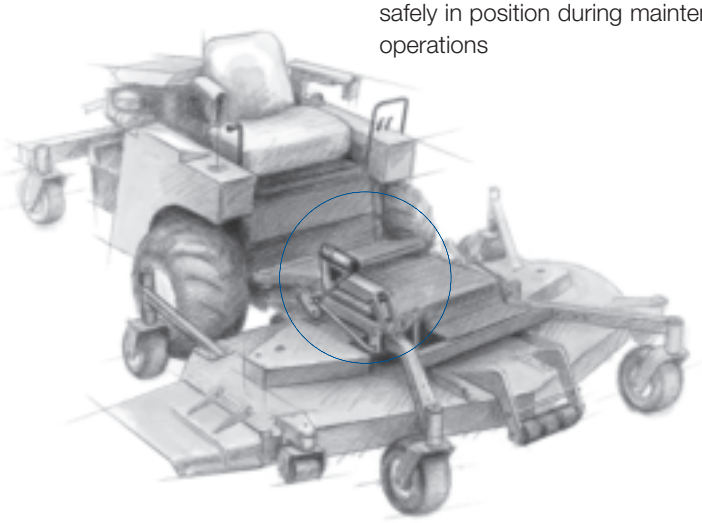
- Load holding with power off
- Simple and inexpensive positioning control

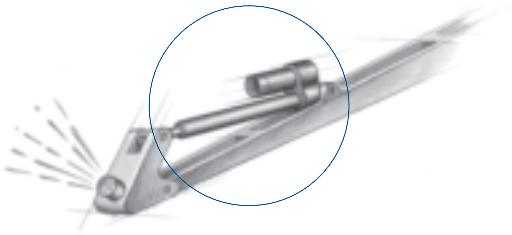
Mower Deck

Actuators provide lift capability of large mower decks to make cleaning, maintenance or replacement of blades simple and easy.

Advantages

- DC units are sealed and gasketed for exposure to outdoor applications
- Electric actuators avoid potential leads and loss of performance of hydraulic plumbing
- Load holding capability keeps the load safely in position during maintenance operations





Sprayer Control

The actuator controls the position of the valve for a spray nozzle.

Advantages

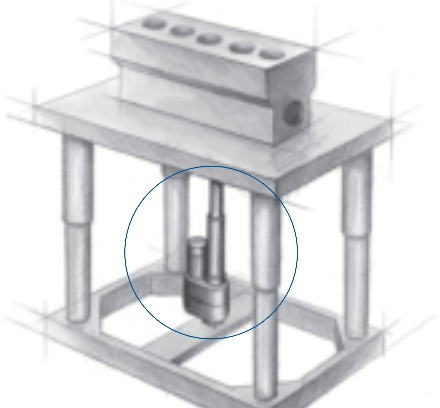
- Holds the load when power is off so that valve stays in position
- DC units can be powered directly off of the battery for mobile equipment
- Actuator can be positioned to accurately position the control valve
- DC units include seals and O-rings appropriate for outdoor usage

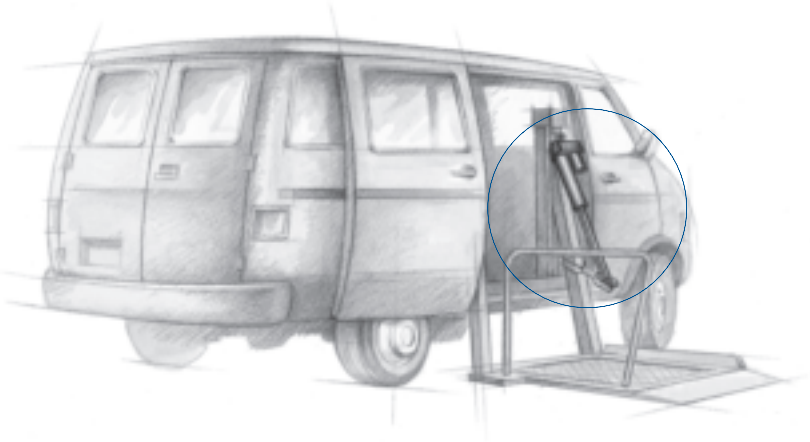
Elevator Platform Lift

Material height can be adjusted directly to the best working height using the actuator. Lift table can operate directly (as shown below) or through a scissor lift.

Advantages

- Actuator holds load with the power off; static load holding capability is higher than move capability
- Overload clutch prevents damage due to excess weight
- Stop position can be varied at any point along the stroke of the unit





Wheelchair Platform

The actuator raises and lowers the platform to allow van access for those in wheelchairs. The battery powered system can provide for push button control for position control.

Advantages

- No pumps, air or hydraulic plumbing needed since the unit can operate off of the van battery
- If power is off, the actuator holds the load stationary
- Overload clutch protects the unit from a jammed platform or too much weight on the platform

Selection Procedure

Step 1 – Determine Load and Stroke length requirements
Use the Quick Selection guide on page 9 to identify the model family that will provide the load capacity and stroke length needed for your application.

Step 2 – Identify motor type and voltage
Select AC or DC motor and motor voltage from Quick Selection Guide.

Step 3 – Confirm Speed and Current draw requirements
Using the charts provided with each model family, confirm that unit speed and current draw is appropriate for the system design.

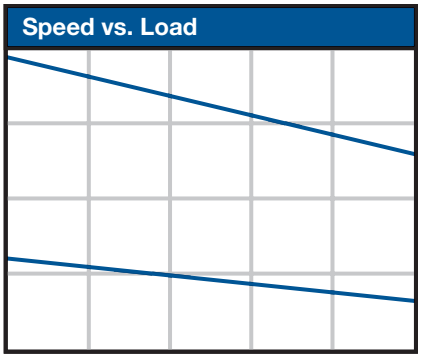
Step 4 – Confirm the application Duty Cycle
At full load capacity, actuators have a 25% duty cycle. Duty cycle is the amount of 'on-time' compared to cooling time. A unit that runs for 15 seconds should be off for 45 seconds.

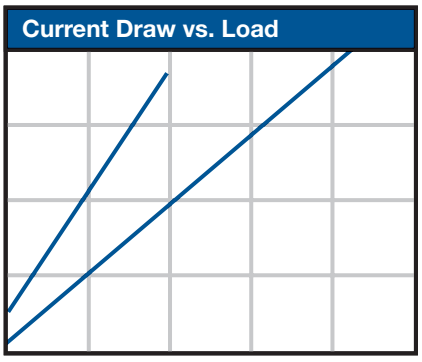
Unit Restrictions

Side loading and shock loads must be considered in actuator applications. Side loading and cantilevered mounting should be eliminated through proper machine design. Side loading will dramatically reduce unit life. While actuators can withstand limited shock loads, it is recommended that shock loading be avoided wherever possible. (see page 21)

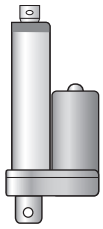
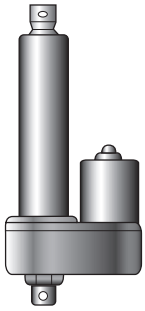
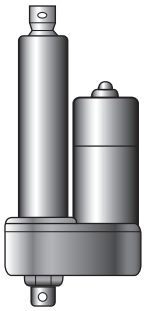
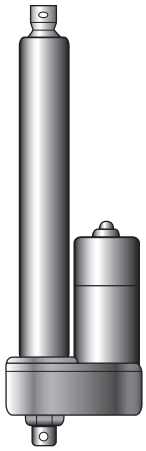
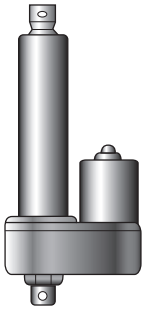
Step 5 – Unit Options
A-Track 1 units include end-of-travel limit switches as a standard feature. For all other units, limit switches are an option that can be factory installed. *For positional feedback, a 10K ohm potentiometer can be factory installed. The changing potentiometer value can provide unit movement feedback for units that are not visible to the machine operator.

**Limit switches are only available at the maximum load for each model.*





Quick Selection Guide

Model	A-Track 1	A-Track 2	A-Track 5		A-Track 10
					
Type of Lead Screw	Acme Screw	Acme Screw	Acme Screw	Ball Screw	Ball Screw
Load Capacity (lbs.)	25, 50, 100, 165	330, 500	330, 500	500, 1000, 1300	500, 750, 1000
Stroke Length (inches)	2, 4, 6, 8, 10, 12	4, 8, 12, 18, 24	4, 8, 12, 18, 24	4, 8, 12, 18, 24	4, 8, 12, 18, 24
Input Voltage	12VDC 24VDC	12VDC 24VDC	115VAC 230VAC	115VAC 230VAC	12VDC 24VDC
Limit Switches	Standard	(20:1 only)* (500 lb.)	(20:1 only)* (500 lb.)	(20:1 only)* (1300 lb.)	(20:1 only)* (1000 lb.)
Feedback Potentiometer	Optional	Optional	Optional	Optional	Optional

**20:1 ratio provides the maximum load capacity for each size unit.*

A-Track | 1

165 lb. Load

The A-Track 1 family of units are completely self-contained and sealed to allow for use in small spaces without sacrificing power or capability. The load and length capabilities provide solutions for a diverse range of intermittent duty applications.

Functionally, the A-Track 1 actuators are easily interchanged with comparable size hydraulic or pneumatic cylinders on intermittent duty applications. The actuator provides consistent, repeatable performance even for applications with operating conditions including temperature extremes, high humidity, or significant dust.

Features

- An Acme Screw drive delivers as much as 165 pounds of force at a minimum extension rate of 0.25 inches per second
- The aluminum zinc alloy housing resists corrosion and provides protection from dirt, dust and humidity
- The A-Track 1 has a temperature operating range of –15º to +150º F
- Standard stroke lengths of 2, 4, 6, 8, 10, 12 inches are available
- Internal limit switches automatically shut off the unit at end of stroke
- Optional potentiometer can provide positional location feedback

Typical Applications

Light load and short distance applications such as:

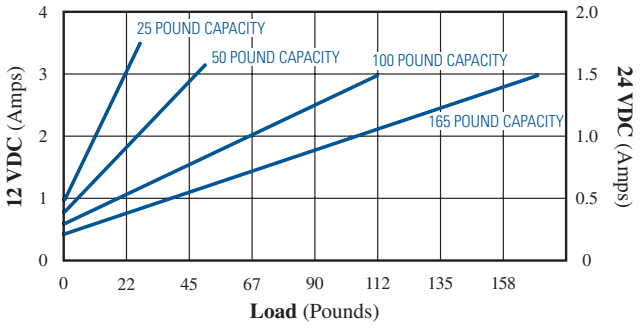
- Valve and vent adjustments
- Light weight tilt or lift positioning
- Vise and clamp operations

Specifications

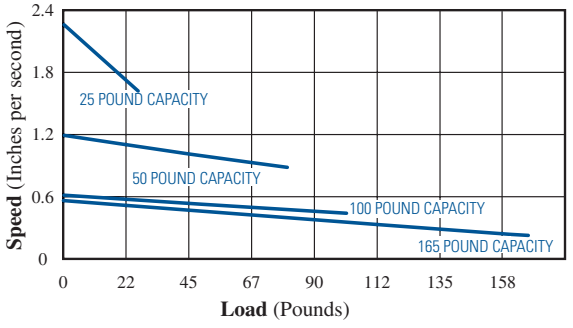
Load Capacity	25 pounds	50 pounds	100 pounds	165 pounds
Speed at Full Load	1.75 in/sec	0.85 in/sec	0.45 in/sec	0.25 in/sec
Input Voltage	12 or 24 volt DC for all models (36 volt optional)			
Static Load Capacity	300 pounds for all models			
Stroke Length	2, 4, 6, 8, 10 and 12 inches for all models			
Clevis Ends	6.4 mm diameter			
Duty Cycle	25% for all models			
Operation Temperature Range	-15º F to +150º F for all models			
Limit Switch	Fixed end of stroke limit switches standard for all units			
Potentiometer	10K, 10 turn pot optional on all units			
Restraining Torque	20 inch pounds for all units			

Performance Curves

Current vs Load



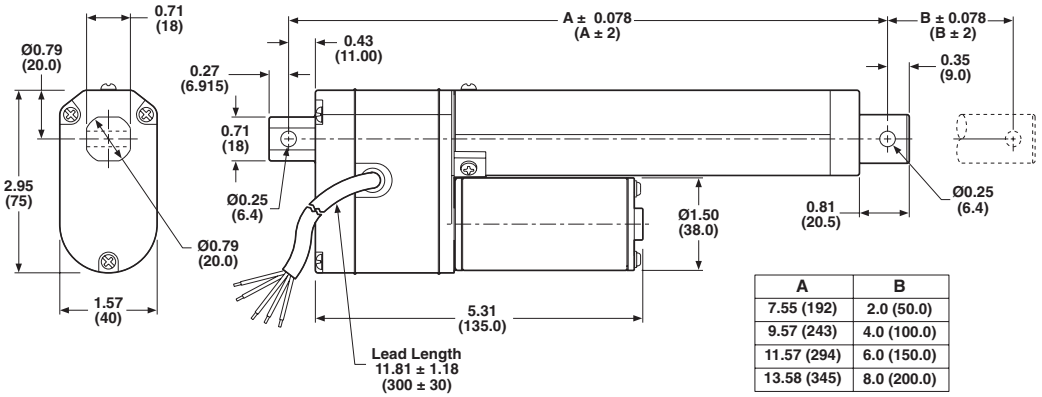
Speed vs Load



Dimensions

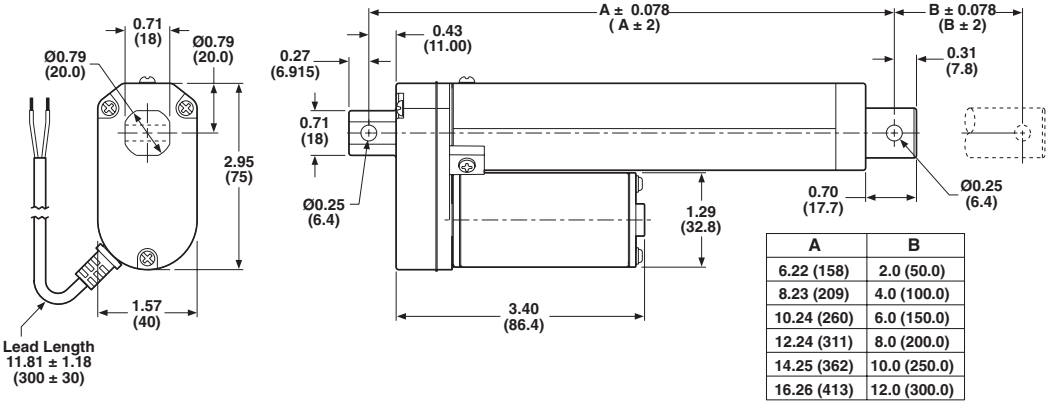
Stroke Length	2		4		6		8		10		12	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
Retracted Length (without POT sensor)	6.22	158	8.23	209	10.24	260	12.24	311	14.25	362	16.26	413
Retracted Length (with POT sensor)	7.56	192	9.57	243	11.57	294	13.58	345	N/A	N/A	N/A	N/A

With Limit Switches and Potentiometer



A	B
7.55 (192)	2.0 (50.0)
9.57 (243)	4.0 (100.0)
11.57 (294)	6.0 (150.0)
13.58 (345)	8.0 (200.0)

With Limit Switch



A	B
6.22 (158)	2.0 (50.0)
8.23 (209)	4.0 (100.0)
10.24 (260)	6.0 (150.0)
12.24 (311)	8.0 (200.0)
14.25 (362)	10.0 (250.0)
16.26 (413)	12.0 (300.0)

A-Track | 2

DC Motor Acme Screw
Up to 500 lbs. Load
Up to .98 in./sec. Speed

Features

- Sealed and gasketed for mobile or outdoor applications
- Overload clutch
- 4, 8, 12, 18 and 24 inch stroke lengths
- 12 or 24 volt DC motors
- Acme screw drive
- Thermal overload included in motor

Typical Applications

- Gate and valve positioning
- Tailgate lifts
- Mobile equipment spout positioning control

General Purpose DC Actuator

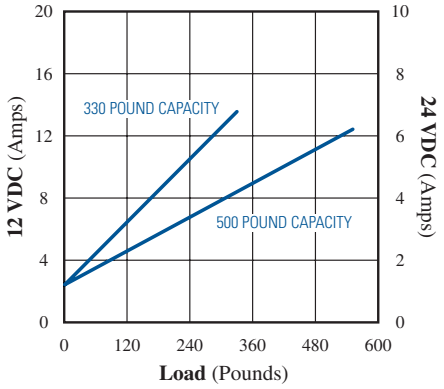
The A-Track 2 incorporates an Acme screw drive system that provides a strong value for moderate duty applications. The A-Track 2 includes lubrication for the life of the unit, which when combined with robust seal and o-ring design creates a maintenance free design even when used in applications with high humidity or dust.

Specifications

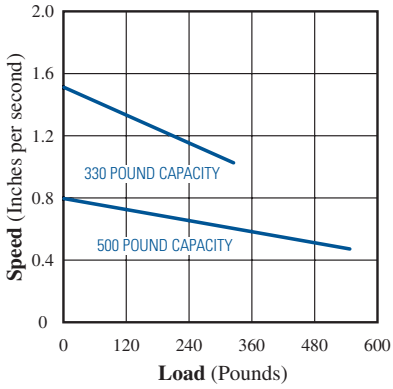
Load Capacity	330 pounds	500 pounds
Speed at Full Load	0.98 in/sec	0.51 in/sec
Input Voltage	12 or 24 volt for all models	
Static Load Capacity	1000 pounds for all models	
Stroke Length	4, 8, 12, 18 and 24 inches for all models	
Clevis Ends	13 mm diameter	
Duty Cycle	25% for all models	
Operation Temperature Range	-15° F to +150° F for all models	
Limit Switch	Optional adjustable travel limit switches (20:1 only) (500 lb.)	
Potentiometer	Optional feedback potentiometer	
Restraining Torque	100 inch pounds	
Thermal Overload	Thermal overload included in all motors	

Performance Curves

Current vs Load



Speed vs Load



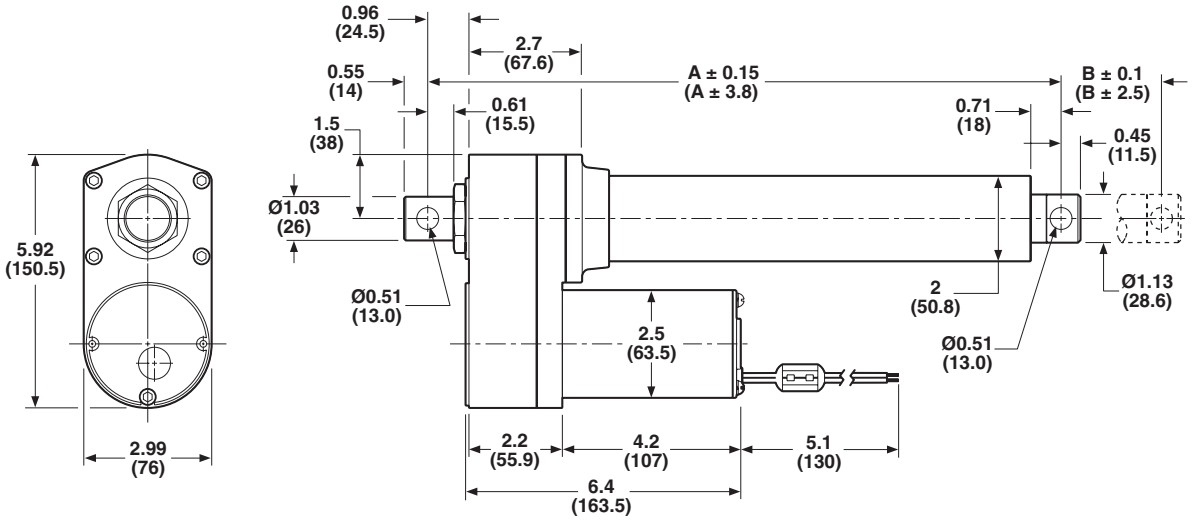
Dimensions

With Limit Switches

	Stroke	4		6		8		12		18		24	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
A-Track 2	A	13.31	338	15.31	389	17.13	435	21.26	540	30.39	772	36.38	924
	B	4.01	102	6.02	153	7.99	203	12.0	305	17.99	457	24.01	610

Without Limit Switches

	Stroke	4		6		8		12		18		24	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
A-Track 2	A	10.3	262	12.32	313	14.33	364	18.31	465	27.40	696	33.39	848
	B	4.01	102	6.02	153	7.99	203	12.00	305	17.99	457	24.01	610



A-Track | 5 Acme

AC Motor Acme Screw
Up to 500 lbs. Load
Up to .98 in./sec. Speed

Features

- 330 and 500 pound load capacity
- 115 volt AC (60hz) and 230 volt AC (50hz) motors available
- 4, 8, 12, 18 and 24 inch strokes
- Acme screw drive train
- Overload clutch
- Lubricated for life
- Capacitor included with motor

Typical Applications

- Ergonomic lift tables
- Conveyor diverters
- Bin/tank cover lifts

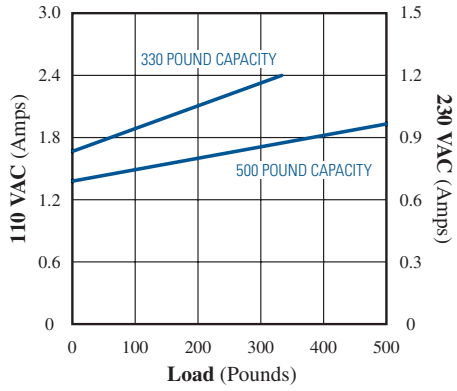
The A-Track 5 Acme actuator provides a general purpose Acme screw drive AC actuator with load capacities of 330 and 500 pounds for use in moderate duty interior applications.

Specifications

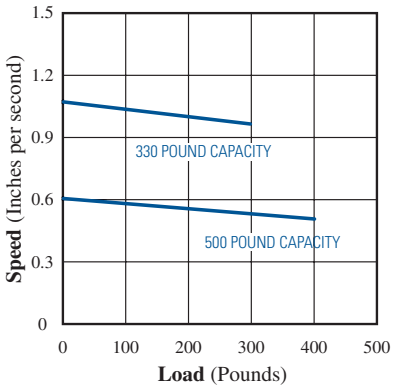
Load Capacity	330 pounds	500 pounds
Speed at Full Load	0.98 in/sec	0.55 in/sec
Input Voltage	115 VAC (60hz) and 230 VAC (50hz) for both models	
Static Load Capacity	1000 pounds for all models	
Stroke Length	4, 8, 12, 18 and 24 inches for all models	
Clevis Ends	13 mm diameter	
Duty Cycle	25% for all models	
Operation Temperature Range	-15º F to +150º F for all models	
Limit Switch	Optional adjustable travel limit switches (20:1 only) (500 lb.)	
Potentiometer	Optional feedback potentiometer	
Restraining Torque	100 inch pounds	
Thermal Overload	Thermal overload included in all motors	

Performance Curves

Current vs Load



Speed vs Load



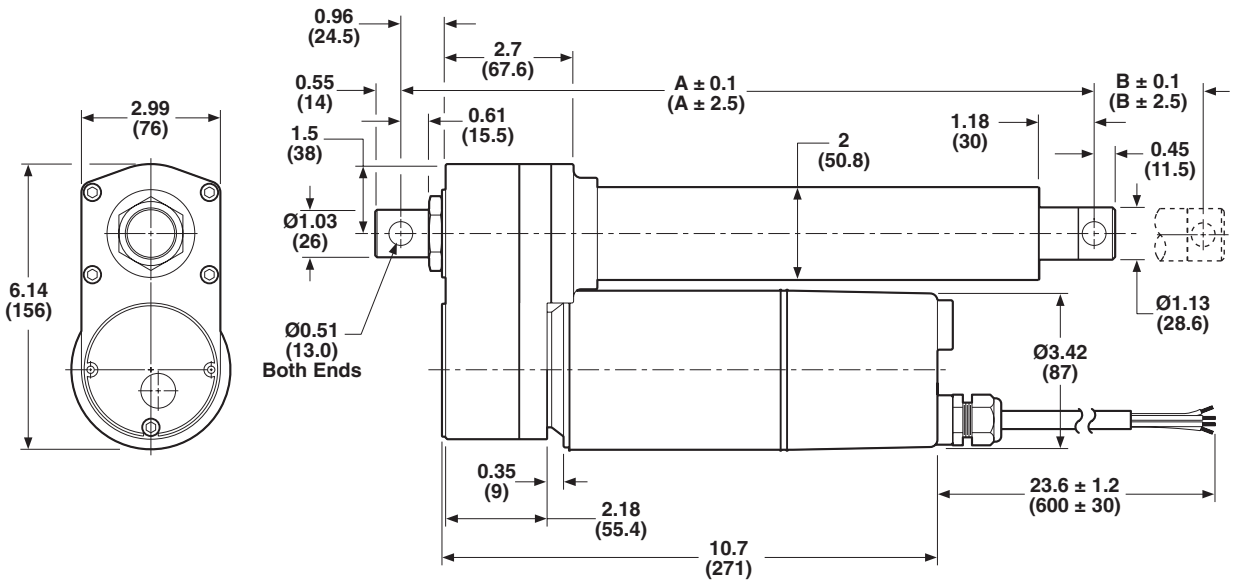
Dimensions

With Limit Switches

	Stroke	4		6		8		12		18		24	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
A-Track 5 Acme	A	17.95	456	19.92	506	21.89	556	25.91	658	31.89	810	37.87	962
	B	4.01	102	6.02	153	7.99	203	12.00	305	17.99	457	24.01	610

Without Limit Switches

	Stroke	4		6		8		12		18		24	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
A-Track 5 Acme	A	14.96	380	16.97	431	18.94	481	22.95	583	28.94	735	34.92	887
	B	4.01	102	6.02	153	7.99	203	12.00	305	17.99	457	24.01	610



A-Track | 5 Ball Screw

AC Motor Ball Screw
Up to 1300 lbs. Load
Up to 1.89 in./sec. Speed

Features

- 500, 1000 and 1300 pounds
- Ball bearing screw drive system
- Anti-coast load holding brake
- 4–24 inch stroke length capability
- Load limiting clutch
- Thermal overload protection in the motor
- Capacitor included in motor

Typical Applications

- Ergonomic lift tables
- Conveyor diverters
- Bin or tank cover lifts
- Die transfer carts

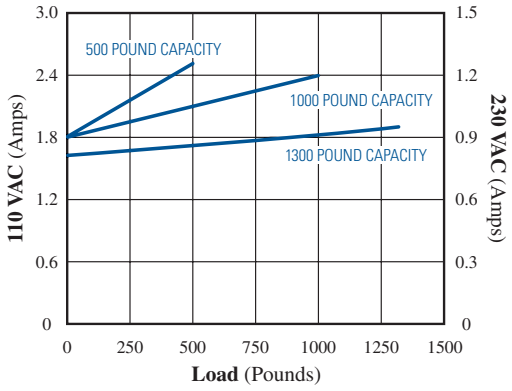
The A-Track 5 Ball Screw is a ball screw drive linear actuator for industrial and commercial applications. The unit provides load capacity up to 1300 pounds with either 110 volt or 220 volt AC motors. The Model 5 allows for stroke lengths of 4 to 24 inches of travel for in plant or protected applications.

Specifications

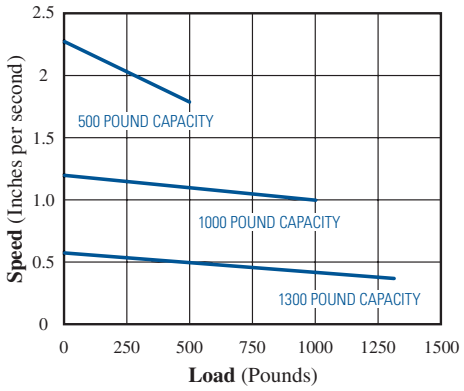
Load Capacity	500 pounds	1000 pounds	1300 pounds
Speed at Full Load	1.89 in/sec	0.98 in/sec	0.47 in/sec
Input Voltage	115 VAC (60hz) / 230 VAC (50hz)		
Static Load Capacity	3050 pounds for all models		
Stroke Length	4, 8, 12, 18 and 24 inches		
Clevis Ends	13 mm diameter		
Duty Cycle	25% for all models		
Operation Temperature Range	-15º F to +150º F for all models		
Limit Switch	Optional for all models (20:1 only) (1300 lbs.)		
Potentiometer	Optional for all models		
Restraining Torque	100 in. lbs.		
Thermal Overload	Overload clutch and motor thermal overload		

Performance Curves

Current vs Load



Speed vs Load



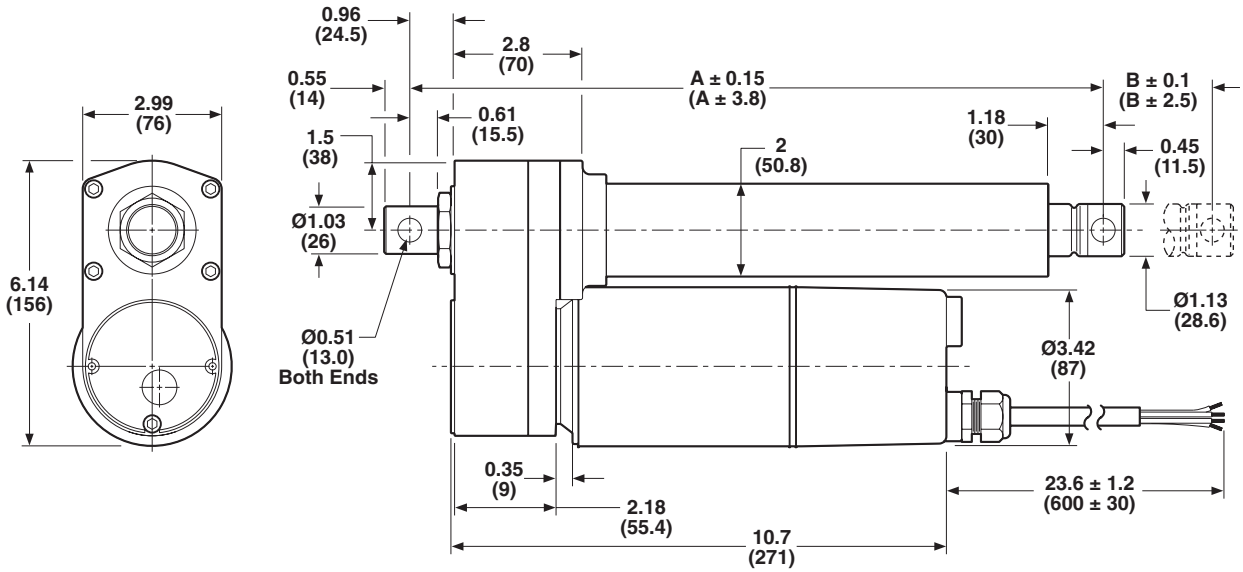
Dimensions

With Limit Switches

	Stroke	4		6		8		12		18		24	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
A-Track 5 Ball Screw	A	17.95	456	19.92	506	21.89	556	25.91	658	31.89	810	37.87	962
	B	4.01	102	6.02	153	7.99	203	12.00	305	17.99	457	24.01	610

Without Limit Switches

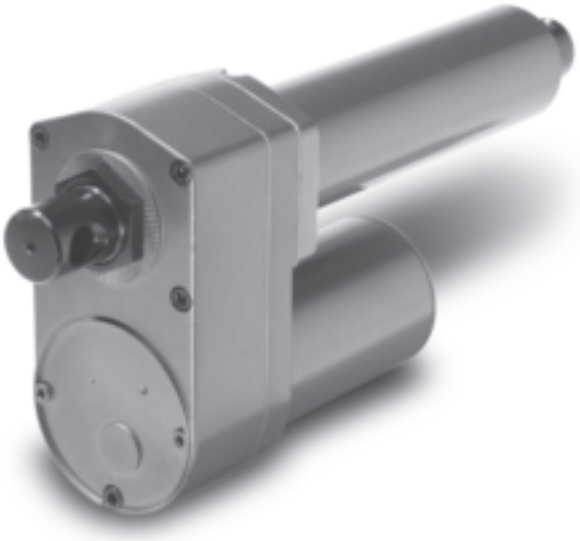
	Stroke	4		6		8		12		18		24	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
A-Track 5 Ball Screw	A	14.96	380	16.97	431	18.94	481	22.95	583	28.94	735	34.92	887
	B	4.01	102	6.02	153	7.99	203	12.00	305	17.99	457	24.01	610



TEKMATIC
Tel: (011) 4222-5040 Fax: (011) 4201-2478.
info@tekmatic.com.ar - www.tekmatic.com.ar

A-Track | 10

DC Motor Ball Screw
Up to 1000 lbs. Load
Up to 1.35 in./sec. Speed



Features

- Protective seals and O-ring design
- Efficient ball screw drive system
- Load holding brake
- Overload clutch
- 4 to 24 inch stroke lengths
- 500 to 1000 pound load capacities
- Thermal overload incorporated into the motor

Typical Applications

- Heavy duty platform lifts
- Deck and implement lifts for tractors and mobile applications
- Wheelchair and scooter lifts
- Bin and tank cover lifts

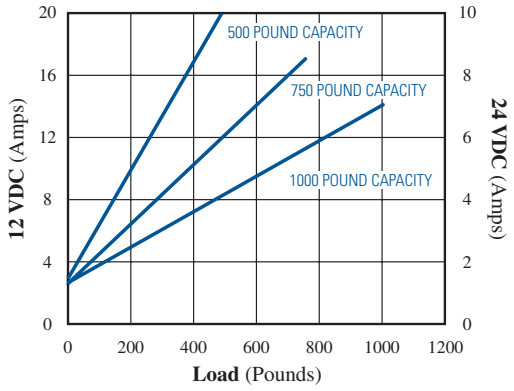
The A-Track 10 actuator is a DC motor driven, ball screw design actuator suitable for applications requiring maximum load capacity. The A-Track 10 incorporates seals and o-rings to provide protection when used in outdoor, mobile or ambient contamination environments. This unit includes a load holding brake to provide stationary load holding while still providing the efficiency of a ball screw design actuator. The Model 10 provides load capacities up to 1000 pounds with stroke lengths to 24 inches.

Specifications

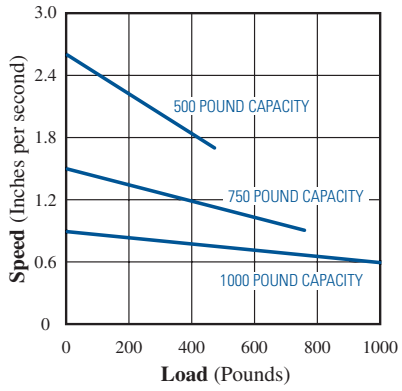
Load Capacity	500 pounds	750 pounds	1000 pounds
Speed at Full Load	1.35 in/sec	0.85 in/sec	0.51 in/sec
Input Voltage	12 or 24 volt DC for all models		
Static Load Capacity	3000 pounds for all models		
Stroke Length	4, 8, 12, 18 and 24 inches for all models		
Clevis Ends	.51 in. / 13mm		
Duty Cycle	25%		
Operation Temperature Range	-15º F to +150º F for all models		
Limit Switch	Optional for all models (20:1 only) (1000 lbs.)		
Potentiometer	Optional for all models		
Restraining Torque	100 in. lbs.		
Thermal Overload	Overload clutch and motor thermal overload for all models		

Performance Curves

Current vs Load



Speed vs Load



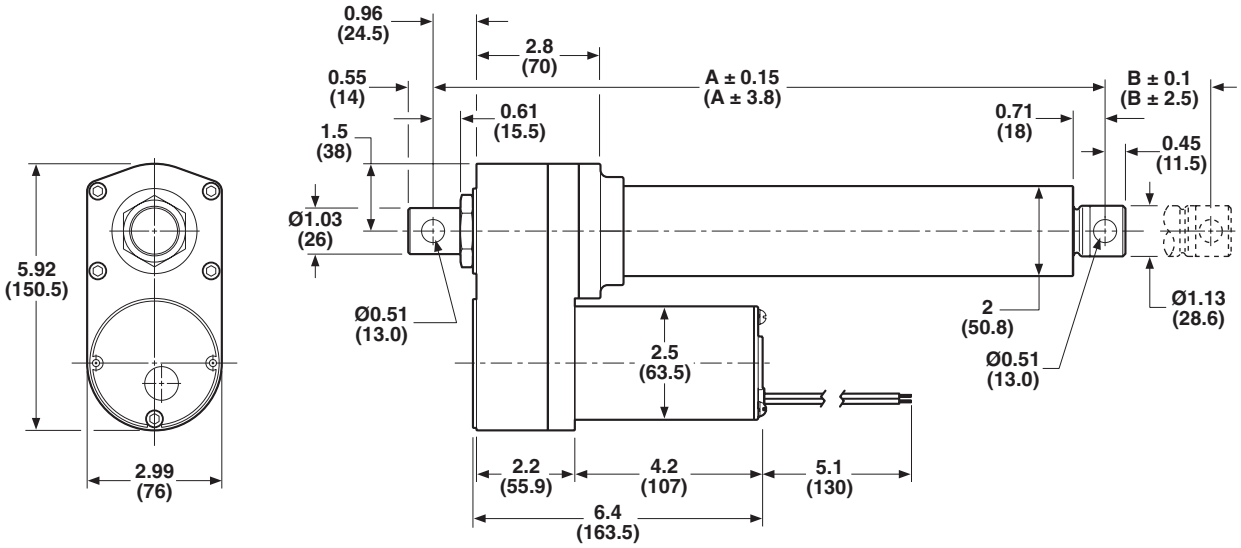
Dimensions

With Limit Switches

A-Track 10	Stroke	4		6		8		12		18		24	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
	A	14.88	378	16.89	429	18.86	479	22.83	580	31.89	810	37.87	962
	B	3.86	98	5.90	150	7.91	201	11.89	302	17.99	457	24.01	610

Without Limit Switches

A-Track 10	Stroke	4		6		8		12		18		24	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
	A	11.89	302	13.90	353	15.90	404	19.88	505	28.94	735	34.92	887
	B	3.86	98	5.90	150	7.91	201	11.89	302	17.99	457	24.01	610



Actuator Part Number Configurator

Potentiometer
P = With Potentiometer
N = No Potentiometer
S = Special Potentiometer option

Actuator Model No.
01 = A-Track 1
02 = A-Track 2
05 = A-Track 5
10 = A-Track 10

Limit Switch Options
L = Limit switches included
N = No Limit switches
S = Special Limit switches included

Modifications=0000
Modified products may have designations assigned by the factory for 1000, 2000 or 3000 series modifications. For standard product, leave blank

Motor Voltage
D012 = 12 volt DC
D024 = 24 volt DC
D036 = 36 volt DC
A115 = 115 volt AC
A230 = 230 volt AC

Model No.	Voltage	Load Capacity	Screw Type	Stroke Length	Limit Switch	Potentiometer	Standard
01	D012	0025	A	02	L	P	0000

Load Capacity
0025 = 25 pounds
0050 = 50 pounds
0100 = 100 pounds
0165 = 165 pounds
0330 = 330 pounds
0500 = 500 pounds
0550 = 550 pounds
0750 = 750 pounds
1000 = 1000 pounds
1300 = 1300 pounds

Not all load ratings are standard for all units. Consult catalog for details.

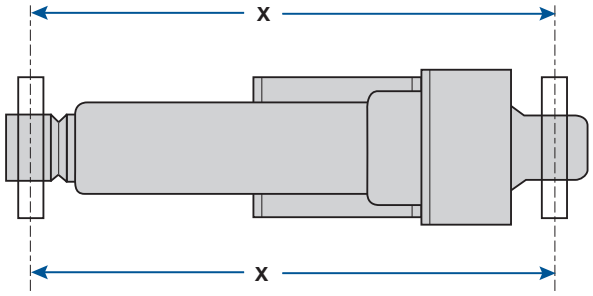
Stroke Length (inches)
02 = 2 inches
04 = 4 inches
06 = 6 inches
08 = 8 inches
10 = 10 inches
12 = 12 inches
18 = 18 inches
24 = 24 inches

Not all stroke lengths are standard on all units. Consult unit page for details.

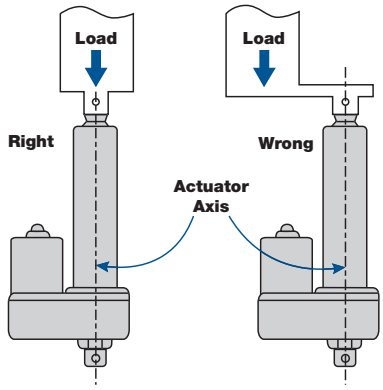
Screw Type
A = Acme Screw
B = Ball Screw

Warner Electric linear actuators are quickly and easily mounted by slipping pins through the holes at each end of the unit and into the brackets on the machine frame and load to be moved.

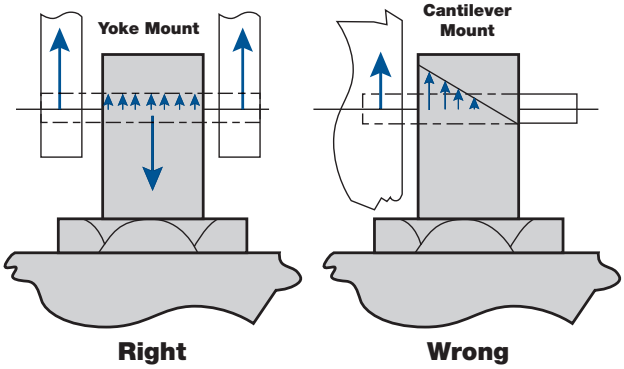
.51 in. diameter solid pins provide maximum holding capability. Use of a retaining ring or cotter pin on each end will prevent the solid pin from falling out of the mounting bracket (it is best to avoid roll pins and spring pins).



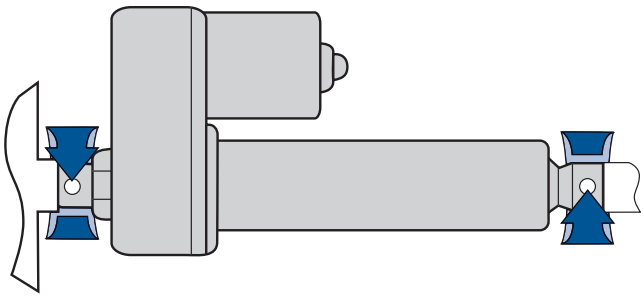
Mounting pins must be parallel to each other as shown above. Pins which are not parallel can cause excess vibration or binding.



Loads should act along the axis of the actuator. Off-center loads may cause binding and lead to premature unit failure.



Ensure that mounting pins are supported at both ends. Cantilevered mounting is unacceptable. Failure to provide proper support will shorten unit life.



Do not attempt to mount A-Track actuators by the cover tube. The tube is not designed to support the forces required for tube mounting.

The actuator mounting supports must be capable of withstanding the load and torque developed when the unit extends or retracts. Restraining torque values are also provided with the details on each unit.

A-Track 1 Torque created 20 inch pounds
All others Torque created 100 inch pounds

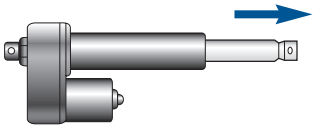


Figure 1 Axial load

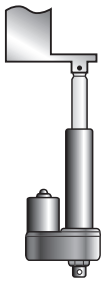


Figure 2 Cantilevered mount

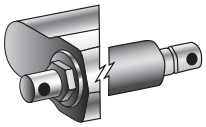


Figure 3 Clevis mount

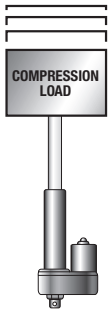


Figure 4 Compression load

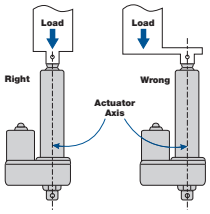


Figure 5 Eccentric load

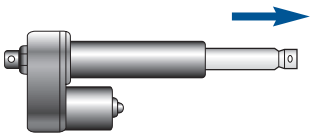


Figure 6 Extended length

Axial load
A load along the axis of the actuator screw (see figure 1).

Back drive
Force applied on a ball bearing nut that causes rotational torque to reverse direction. A force sufficient to cause a unit to reverse direction.

Cantilevered mount
A mounting where the mounting pin is not supported on both sides. Cantilevered mounts are common causes of failure (see figure 2).

Clevis mount
A U-shaped metal piece that has the ends drilled to accept a pin or bolt (see figure 3).

Compression load
Compression loading will press on the unit (see figure 4).

Cover tube
The outer tube or cover that encloses the screw and extension tube for an actuator.

Current vs. load
The load on the motor is measured by amperes (current). Current draw will increase as load increases.

Cycle
Movement from a fully retracted to fully extended position and back to fully retracted.

Duty cycle
The amount of 'on-time' vs total time. A 25% duty cycle means that a unit operates for 10 seconds out of 40 seconds, or 4 seconds out of 16 seconds.

Eccentric load
An off-center load which may cause binding and shorten actuator life (see figure 5).

End play
The amount of backlash or movement between the extension tube and the body of the actuator.

Extension rate
The rate of speed at which the actuator extends or retracts. This will vary based on loading (impact of load on speed is greater on DC units than on AC units).

Efficiency
Ratio of input power to output power.

Extended length
The overall length of the actuator from the center of the rear clevis to the center of the extension tube pin hole when the unit is at full extension (see figure 6).

Load
The force, measured in pounds, that is applied as an axial load on the actuator.

Load holding
The ability of the actuator to hold a load stationary when power is off.

Peak load
The maximum dynamic load that will be applied to the actuator, or that the actuator is capable of moving.

Pin mount
The use of a dowel or pin through the hole in the clevis mount (on the rear of an actuator) or the extension tube (on the front of an actuator) (see figure 7).

Radial load
A load applied to the side of the extension tube or across the body of the actuator. Normally radial loading will have a negative impact on unit life (see figure 8).

Restraining torque
The torque required to prevent torque within the unit from causing rotation on the body or extension tube of the unit (see figure 9).

Retracted length
The overall length of the actuator from the center of the rear clevis to the center of the extension tube pin hole when the unit is at full retracted position (see figure 10).

Side load
See radial loading (see figure 8).

Static load
The maximum non-operating (or non-moving) load. Static load is the load holding capability of an actuator.

Tension load
A load that will tend to pull on the unit (see figure 11).

Thermal overload
A switch within the motor that will open if the motor exceeds a predetermined heat level.

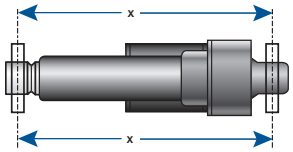


Figure 7 Pin mount

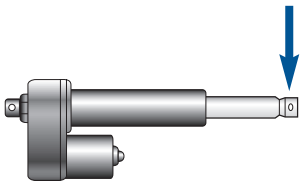


Figure 8 Radial load also side loading

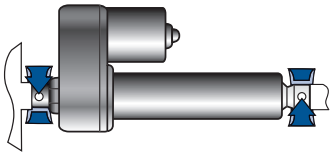


Figure 9 Restraining torque

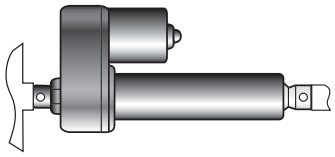


Figure 10 Retracted length

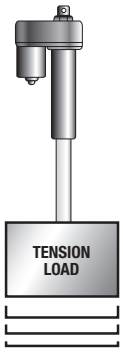


Figure 11 Tension load

A-Track | Application Data Form

Mail or Fax to:

Warner Electric
Application Engineering
449 Gardner Street, South Beloit, Il 61080

FAX: 815-389-6678
Phone: 800-825-9050

Date _____

Company _____

Address _____

City _____ State _____ Zip _____

Name _____

Title _____ Phone (____) _____

Basic Application

Load _____ lbs.

Side Load _____ lbs.

Speed _____ Inches per second

Duty Cycle _____ % of running time vs. still time

Stroke _____ Inches

Life _____ Inches

Environment ___ clean ___ damp
___ oil splash ___ outdoors

Power available _____ VAC
_____ VDC

Quantity _____

Drawing of Application

ALTRA INDUSTRIAL MOTION

Warner Electric

Electromagnetic Clutches and Brakes - USA

South Beloit, IL 61080
815-389-3771

For application assistance:
1-800-825-9050

Electromagnetic Clutches and Brakes - Europe

Allonnes, France
+33 (0)2 43 43 63 63

Precision Electric Coils - USA

Columbia City, IN 46725
260-244-6183

Boston Gear

Enclosed and Open Gearing, Electrical and Mechanical P.T. Components

Quincy, MA 02171
617-328-3300

For Customer Service:
1-888-999-9860

For Application Assistance:
1-800-816-5608

Formsprag Clutch

Overrunning Clutches and Holdbacks

Warren, MI 48089
586-758-5000

For application assistance:
1-800-927-3262

Stieber Clutch

Overrunning Clutches and Holdbacks

Heidelberg, Germany
+49 (0)6221 30 47 0

Marland Clutch

Roller Ramp and Sprag Type Overrunning Clutches and Backstops

Burr Ridge, IL 60527
630-455-1752

Nuttall Gear and Delroyd Worm Gear

Worm Gear and Helical Speed Reducers

Niagara Falls, NY 14302
716-731-5180

Wichita Clutch and Industrial Clutch

Pneumatic and Oil Immersed Clutches and Brakes - USA

Wichita Falls, TX 76302
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