

Electric Actuators and Actuator Controls



 **Warner Linear®**
Altra Industrial Motion





Warner Linear... Customer Focused, Quality Driven

Quality Processes

Our quality starts in product design. It is demonstrated in the attention given to design details and the refinement of prototypes. It is apparent in our fast response to requests for quotes, and our strict adherence to deadlines in every stage of the work flow.

Service to Our Customers

Our knowledgeable staff is involved on a daily basis in customer communications, team based problem solving, and continuous improvement. We are sensitive to satisfying specific customer requirements and expectations.

Custom Solutions

We recognize how critical our actuators are to the overall performance of your equipment. Working closely with your engineering staff, we strive for an early understanding of how you want your linear actuator to perform.

Building a direct communication line from our engineer to your engineer provides a number of significant benefits.

- A teaming of creative resources.
- Joint understanding of our actuator capabilities and how they can be tailored to your application.
- An understanding of the lowest cost solution to meet your actuator requirements.
- Providing a complete solution that includes controls as required.

Design and Testing

Our application engineers and design specialists work closely with our customers to define both lab and field testing requirements. Our solid model design capabilities, computer assisted testing, and manufacturing floor pre-shipment cycle test, all provide assurance that your Warner Linear actuators will meet or exceed your expectations.

Our linear actuator testing capabilities include dual load life cycling stands, low and high pressure wash down test tanks, lift test stands and thermal shock submersion. Our test service providers add material analysis, noise and vibration evaluation capabilities.

Typical Actuator Applications

M-Track 1

- Throttle Control
- Air Vent Opening
- Remote Window Operation
- Remote Mirror Positioning
- Gate Opening
- Shutter Control

S-Track

- Indoor Office Equipment
- Medical
- Deck Lifts
- Gate Openers

I-Track

- Throttle Controls
- Hydraulic Flow Controls
- Bus Door Operator
- Hatch Lift Applications
- Handicap Van Lifts
- Engine Controls
- Emergency Door (lock and unlock via VDC)

B-Track K2VL

- Fertilizer Gate Control
- Mower Decks
- Gate Openers
- Scooter & Cycle Lifts
- Pull Behind Implement Lifts

B-Track K2

- Residential Mower Decks
- Gate & Valve Operation
- Snow Blowers
- Spouts & Chutes
- Engine Lifts
- Tables
- Wagon Lifts
- Combine Concaves

B-Track K2x

- Paving Outriggers
- Commercial Mower Decks
- Spray Booms
- ATV Dump Box Lifts
- Boat Engine Cover Lifts
- Hydraulic Cylinder Replacement
- Construction Equipment
- Hood Lifts



Visit www.warnerlinear.com for more information, including a full line catalog available as a pdf download in the literature portal.



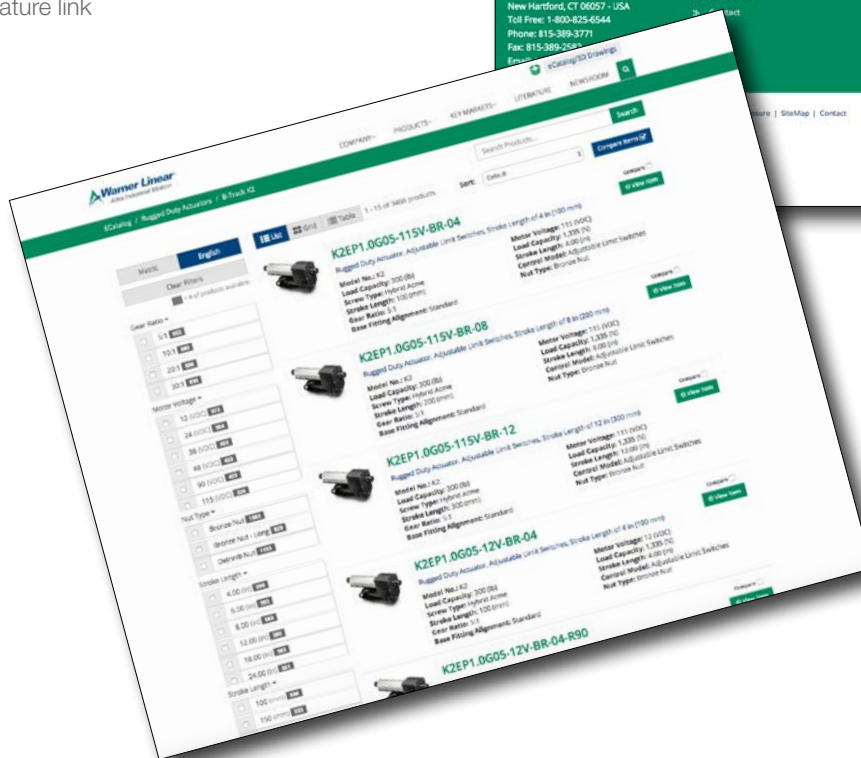
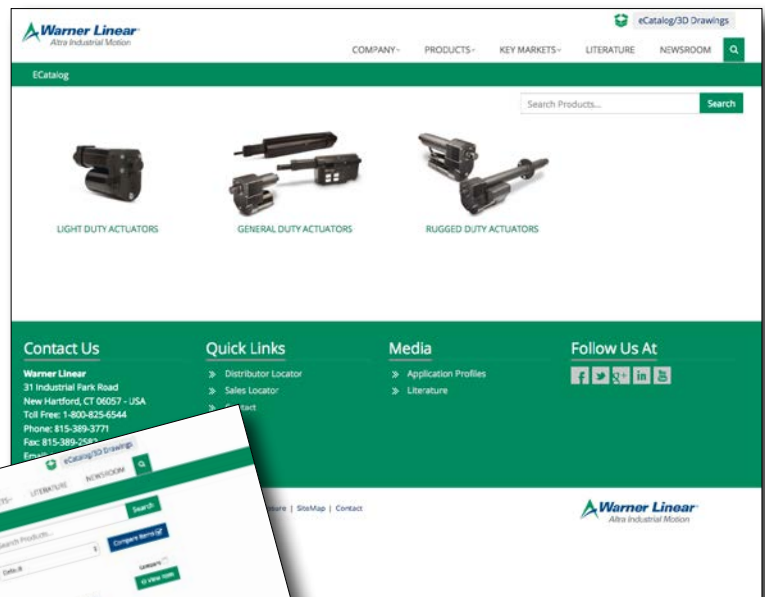
Check out the e-Catalog at warnerlinear.com

Selecting the right product for your application is fast and easy with these useful features...

- Utilize specification filters to instantly narrow your search
- Compare specifications for multiple models (side-by-side)
- View individual specification pages for additional information
- View 3D models
- Download CAD drawings in various formats
- Submit a RFQ
- View your cart to check part selections
- Search for a specific part number
- Data provided in both Imperial and Metric
- Easy access literature link

Click on the Product Selector tab to start your search

You can also search by entering a product part number or description



Refine your search criteria with specification filters including:

- Gear Ratio
- Motor Voltage
- Motor Type
- Nut Type
- Stroke Length
- Base Fitting Alignment



How To Select

Step 1 – Determine load and stroke length requirements

Use the Quick Selection guide to identify the model that will provide the load capacity and stroke length needed for your application.

Step 2 – Identify motor type and voltage

Select DC motor and motor voltage.

Step 3 – Confirm speed and current draw requirements

Using the charts provided, confirm that unit speed and current draw are appropriate for the intended use.

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.

Light Duty



IP69K*

M-Track 1

Compact, completely self-contained and sealed to allow for use in small spaces without sacrificing power or capability.

Drive Type:

Acme Screw

Load Capacity & Speed

Lbs. @ in./sec. (N@mm/sec)
25 @ 1.75 (111@45)
50 @ 0.80 (222@20)
100 @ 0.45 (445@11)
165 @ 0.25 (734@6)

Stand. Stroke Length

in. (mm)
2, 4, 6, 8, 10, 12
(50, 100, 150, 200, 254, 300)

Input Voltage (VDC):

12, 24

General Duty



IP69K*
CE

S-Track

Intended for general duty applications with need for controllability and quieter operation.

Drive Type:

Acme Screw

Load Capacity & Speed

Lbs. @ in./sec. (N@mm/sec)
125 @ 1.0 (556 @ 25)
175 @ 0.75 (778 @ 18)
200 @ 0.50 (890 @ 12)
225 @ 0.62 (1001 @ 15)
300 @ 0.33 (1334 @ 8)
400 @ 0.25 (1779 @ 6)

Stand. Stroke Length

in. (mm)
2, 4, 6, 8, 10, 12
(50, 100, 150, 200, 254, 300)

Input Voltage (VDC):

12, 24



IP69K*
CE

I-Track

Unique inline actuator with power-off release feature and designed to fit in limited space applications for loads up to 200 lbs. (90 kg).

Drive Type:

Ball Screw

Load Capacity & Speed

Lbs. @ in./sec. (N@mm/sec)
200 @ 1.1 (890 @ 26)

Stand. Stroke Length

in. (mm)
2, 4, 6, 8, 10, 12
(50, 100, 150, 200, 254, 300)

Input Voltage (VDC):

12, 24

*See I-Track configurator on next page



IP69K*
CE

B-Track K2vL*

Intended for severe service requirements and loads up to 600 lbs. (270 kg). Lowest priced model in the B-Track family.

Drive Type:

Hybrid Acme

Load Capacity & Speed

Lbs. @ in./sec. (N@mm/sec)
200 @ 2.0 (890 @ 50)
300 @ 1.0 (1334 @ 25)
600 @ 0.5 (2669 @ 12)

Stand. Stroke Length

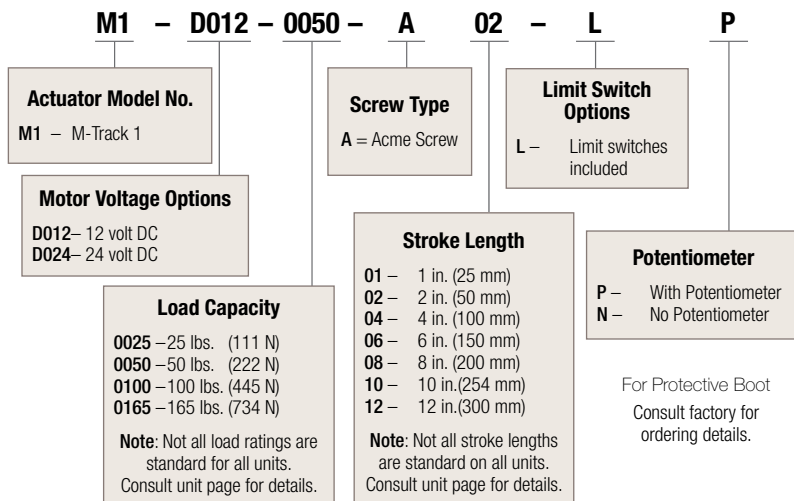
in. (mm)
2, 4, 6, 8, 10, 12
(50, 100, 150, 200, 254, 300)

Input Voltage (VDC):

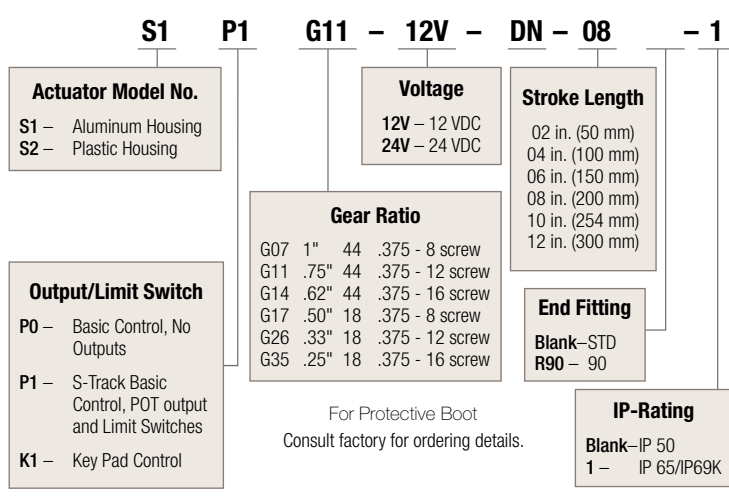
12, 24, 48, 90

*See B-Track configurator on next page

M-Track Configurator



S-Track Configurator





Rugged Duty



IP54*

B-Track K2 (AC version)

Uses a patented in-line load transfer offering high load capability in a small package size. Bronze or Delrin® nut options available for high impact load applications (up to 1,500 lbs.).

Drive Type:
Hybrid Acme

Load Capacity & Speed

lbs. @ in./sec. (N@mm/sec)
500 @ 1.0 (2224 @ 25)
750 @ 0.50 (3336 @ 12)
1100 @ 0.33 (4893 @ 8)

Stand. Stroke Length

in. (mm)
4 to 24 in 2" increments
(100 to 600 in 50 mm increments)

Input Voltage (VAC):
115, 230

IP69K*
CE

B-Track K2

Uses a patented in-line load transfer offering high load capability in a small package size. Bronze or Delrin® nut options available for high impact load applications (up to 1,500 lbs.).

Drive Type:
Hybrid Acme

Load Capacity & Speed

lbs. @ in./sec. (N@mm/sec)
300 @ 2.0 (1334 @ 50)
600 @ 1.0 (2669 @ 25)
1200 @ 0.5 (5338 @ 12)
1500 @ 0.35 (6672 @ 9)

Stand. Stroke Length

in. (mm)
2 to 24 in 2" increments
(50 to 600 in 50 mm increments)

Input Voltage (VDC):
12, 24, 48, 90

IP69K*
CE

B-Track K2x

Completely sealed, designed for tough, high load applications. Able to perform in harsh environments providing years of trouble-free service.

Drive Type:
Ball Screw & Ball Nut

Load Capacity & Speed

lbs. @ in./sec. (N@mm/sec)
600 @ 2.0 (2669 @ 50)
1200 @ 1.0 (5338 @ 25)
2200 @ 0.5 (9786 @ 12)
2800 @ 0.25 (12455 @ 6)

Stand. Stroke Length

in. (mm)
2 to 24 in 2" increments
(50 to 600 in 50 mm increments)

Input Voltage (VDC):
12, 24, 48, 90



IP54*

B-Track K2x (AC version)

Completely sealed, designed for tough, high load applications. Able to perform in harsh environments providing years of trouble-free service.

Drive Type:
Ball Screw & Ball Nut

Load Capacity & Speed

lbs. @ in./sec. (N@mm/sec)
500 @ 2.0 (2224 @ 50)
1000 @ 1.0 (4448 @ 25)
1500 @ 0.5 (6672 @ 12)
2000 @ 0.33 (8900 @ 8)

Stand. Stroke Length

in. (mm)
4 to 24 in 2" increments
(100 to 600 in 50 mm increments)

Input Voltage (VAC):
115, 230

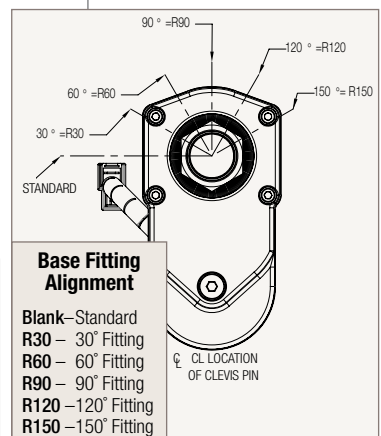
I-Track Configurator

I1X	P	G05	12V	02
Actuator Model No.				
I1X – I-track				
Potentiometer				
P – Potentiometer Blank – No Potentiometer				
Gear Ratio				
G05 – 5:1 200LBF				
Voltage				
12V – 12 volt DC 24V – 24 volt DC				
Stroke Length				
02 – 2 in (50 mm) 03 – 3 in (75 mm) 04 – 4 in (100 mm) 06 – 6 in (150 mm) 08 – 8 in (200 mm) 10 – 10 in (254 mm) 12 – 12 in (300 mm)				

B-Track Configurator

K2x	P1.x	G20	12V	M	BR	04	R120
Actuator Model No.							
K2x K2 K2vL							
Gear Ratio							
G30 = 30:1 G20 = 20:1 G10 = 10:1 G05 = 5:1							
Control Model							
P1.x Fixed Limit Switch P2.x Position Feedback EP1.x Adjustable Limit Switches RP Low Switching (K2vL Not Available)							
Note: See control pages for full listing of model numbers.							
Motor Voltage							
12V – 12 volts 24V – 24 volts 36V – 36 volts 48V – 48 volts 90V – 90 volts 115V – 115 volts 230V – 230 volts							
Motor Type							
M – Ignition Protected Motor For standard motor, leave blank.							
Nut Type*							
Blank – K2x BR – Bronze Nut BRL – Bronze Nut - Long DN – Delrin® Nut *BRL matches K2x pin to pin							
Stroke Length							
04 – 4.00 (100 mm) 06 – 6.00 (150 mm) 08 – 8.00 (200 mm) 12 – 12.00 (300 mm) 18 – 18.00 (450 mm) 24 – 24.00 (600 mm)							
Base Fitting Alignment							
Blank – Standard R30 – 30° Fitting R60 – 60° Fitting R90 – 90° Fitting R120 – 120° Fitting R150 – 150° Fitting							

*See catalog for additional details on IP Ratings.





Special Purpose Actuators



B-Track K2PL / K2XPL

Power Lift Actuator
DC Motor – Acme or Ball Screw
 Up to 2,200 lbs. Rated Load
 Up to 2.1 in./sec. Travel Speed



B-Track K2Js / K2XJs

Jack Stand Actuator
DC Motor – Acme or Ball Screw
 Up to 2,800 lbs. Rated Load
 Up to 2.1 in./sec. Travel Speed

Shown with
 optional switch
 box, direct drive
 manual override,
 and footpad.



B-Track K2RA

Rotary Actuator
DC Motor
 Up to 140 in.-lb. Torque Output
 Speeds from 250 to 850 RPM

Custom Actuator Solutions

Warner Linear offers a broad range of standard actuators to suit many needs. We realize though, that often special application parameters dictate special actuator configurations and modifications. Warner Linear actuators are designed with this in mind, as many of our products can be readily customized to suit specific requirements.

Our products are built on modules that can be mixed and matched in final assembly. Our final assembly operations are configured to provide flexible assembly to accommodate custom orders, quickly and cost effectively.

If your application has a special need that our standard catalog products are unable to fit, please contact your Warner Linear representative or consult with our technical specialists so we can configure a product to fit your need.

A few of our standard special offerings:

- Special pin to pin lengths and stroke lengths
- Special end fittings and mounting configurations
- Special paints and motor lead wire lengths and connectors



Examples of special
 request features shown



Simple Switch Box Controls



SBC-AC

- Easy to use with 115 or 230 VAC input to reverse AC power to the actuator using the DPDT momentary toggle switch on the cover.
- Supplied with 6ft. (182cm) open ended, tinned AC input cable (output cable customer supplied).



SBC-DC

- Easy to use with 12, 24 and 48 VDC actuators to reverse power to the actuator using the DPDT momentary toggle switch on the cover.
- Supplied with 12ft. (365cm), 2-wire, 14 AWG input power cable with alligator clip ends and 1ft. output cable with weather pack connector (other options available).

P1-DC Electronic Stroke Limit Control

The P1-ED control provides end of travel stopping by turning off power to the motor via on-board relay. Solid State Hall effect sensors in combination with electronic dynamic braking provide accurate and rapid stops. Sensors are nonadjustable, but applicable in all load ratings and stroke lengths. 12 and 24 volt only.

EP1-DC Adjustable Stroke Limit Control

The EP1 control provides end of travel stopping with limit switches that are field adjustable for applications where fine tuning of travel is required. 12 and 24 volt only.

PQS Quick Stop Control

The PQS is a bi-directional current limit control. The control monitors current during actuator motion and quickly stops the actuator if an object gets in the way or at the end of stroke.

P2-DC Position Feedback Control

The P2-DC is a microprocessor position feedback control providing a 0-10 volt analog output throughout actuator travel.

RP Low Input Switching Control

This control provides the switching logic to use low current signal inputs for extending and retracting the actuator rod/screw. It mounts on the back end of Warner Linear's 12VDC B-Track motor/actuator product.

Wireless Actuator Control

Warner Linear's wireless actuator control can be used to remotely control a 12 or 24VDC actuator up to 100 ft. away.

AC to DC Power Supply Products



M-Track 12 VDC or 24 VDC Output

- Switching power supply with 85-264 VAC auto-ranging input. Supplied with 6ft. (182cm) open ended, tinned cable. 115 VAC, 3-prong plug can also be provided.
- 12 VDC @ 5.4 Amps or 24 VDC @ 2.7 Amp versions available.
- Can be provided with DPDT momentary rocker switch to reverse power to the actuator.



B-Track 24 VDC or 90 VDC Output

- Linear supply with 115 or 230 VAC input options available. Supplied with 6ft. (182cm) open ended, tinned cable. 115 VAC, 3-prong plug can also be provided.
- Outputs 24 VDC @ 12 Amps on 1ft. (30cm) power cable to actuator with 2-pin Packard or Weatherpack connector to mate with actuator, or 90 VDC @ 5 Amps on a 1ft. (30cm) cable with 3-pin Deutsch connector.
- Can be provided with DPDT momentary rocker switch to reverse power to the actuator.
- Speed pot option available on the 90 VDC to vary voltage output to actuator which changes speed.

Warner Linear Facilities

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North America

USA

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New Hartford, CT 06057 - USA
800-825-6544

The Brands of Altra Industrial Motion

Couplings

Ameridrives
www.ameridrives.com

Bibby Turboflex
www.bibbyturboflex.com

Guardian Couplings
www.guardiancouplings.com

Huco
www.huco.com

Lamiflex Couplings
www.lamiflexcouplings.com

Stromag
www.stromag.com

TB Wood's
www.tbwoods.com

Geared Cam Limit Switches

Stromag
www.stromag.com

Electric Clutches & Brakes

Inertia Dynamics
www.idicb.com

Matrix
www.matrix-international.com

Stromag
www.stromag.com

Warner Electric
www.warnerelectric.com

Linear Products

Warner Linear
www.warnerlinear.com

Engineered Bearing Assemblies

Kilian
www.kilianbearings.com

Heavy Duty Clutches & Brakes

Industrial Clutch
www.indclutch.com

Twiflex
www.twiflex.com

Stromag
www.stromag.com

Svendborg Brakes
www.svendborg-brakes.com

Wichita Clutch
www.wichitaclutch.com

Belted Drives

TB Wood's
www.tbwoods.com

Gearing

Bauer Gear Motor
www.bauergears.com

Boston Gear
www.bostongear.com

Delroyd Worm Gear
www.delroyd.com

Nuttall Gear
www.nuttallgear.com

Overrunning Clutches

Formsprag Clutch
www.formsprag.com

Marland Clutch
www.marland.com

Stieber
www.stieberclutch.com

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