



Precision Linear Actuators



*Helping you build a better machine, **faster.***

Presentation

Danaher Motion

Danaher Motion is one of the leading suppliers of motion control products in the world offering a complete product portfolio. Actuators, servo motors, lead screws, servo drives and controls are just some of the products manufactured by Danaher Motion. Danaher Motion has plants, support centers and sales offices all around the globe. In addition we have a large network of distributors and system houses that all are ready to support you throughout the entire life cycle of the product.

Precision linear actuators

The precision linear actuator range is a result of over 40 years of actuator development and represents the state of the art in linear actuator design. Danaher Motion offers two series of high performance precision linear actuators - the black EC series in four sizes and the aluminum-colored ECT series in two sizes.

EC series

The proven design of the EC actuators has found its way into thousands of applications throughout the world. Regardless of the environment or requirement, we can customize our standard models to fit just about any application. The EC series combines durability and ease-of-use with the largest selection of factory-engineered options available today.

ECT series

The ECT series is our highest performing line of precision linear actuators. Designed for the most demanding applications, the ECT series is ideal when the maximum available performance and longest life cycle are required. Precision-rolled ball screws provide smooth motion, accurate positioning, and quiet operation. The ECT series guarantees trouble-free operation even in the toughest applications.

On-line selection software

On www.danahermotion.com/PLA_advisor you can select a precision linear actuator by using the PLA advisor. This easy to use software lets you play with all the parameters and will give you all the relevant data and the correct ordering information for your choice.



Features and benefits

Precision linear actuators are ideal for positioning loads that are either externally-guided and supported, or pivoting. They are also ideal where there is a high concentration of airborne contaminants, as rodless actuators are inherently less well protected. Another suitable area is the replacement of hydraulic or pneumatic cylinders where they bring many benefits compared to the traditional technologies.

Handling, machining and manufacturing

Precision linear actuators can successfully be used in handling, machining and manufacturing applications. The broad range of options and accessories makes it easy to find the perfect actuator for most applications.

Strong, fast and accurate

The hallmark for the entire range of precision linear actuators is the ability to work hard, fast and accurately, day in and day out, under the toughest conditions.

Hydraulics and pneumatics replacement

Precision linear actuators are direct descendants of hydraulic and pneumatic cylinders. Possessing many of the same unique design characteristics that made hydraulic and pneumatic cylinders popular, actuators benefit from cleaner, simpler and more energy-efficient power transmission. They are also much easier to integrate with modern programmable controls, have greater accuracy and are less noisy.

Harsh environments

Chemical plants, paper mills, welding operations and outdoor applications are all suitable for precision linear actuators. IP65 protection, a robust design and the use of high-quality components makes them suitable for almost every location.

Minimum maintenance

All precision linear actuators are designed to require a minimum of maintenance. There are no parts that need to be replaced due to wear. And only in applications where the actuators need to work very hard and frequently will any regular lubrication be needed.

Customized units

Customization is one of our strengths. Do you need a special stroke, a unique mounting bracket or some other adaptation of the standard product? No problem. Just contact us and we will be glad to help you to find the perfect solution to your application.



Performance overview

		EC2	EC3	
				
Load				
Maximum load, Fx	[N]	3600	7200	
Maximum load, Fy	[N]	0	0	
Maximum load, Fz	[N]	0	0	
Maximum load torque, Mx	[Nm]	5	7,5	
Maximum load torque, My	[Nm]	0	0	
Maximum load torque, Mz	[Nm]	0	0	
Stroke				
Maximum standard stroke	[mm]	750	1000	
Speed				
Maximum speed	[m/s]	1,28	1,28	
Accuracy				
Repeatability	[± mm]	0,013	0,013	
Backlash - acme / ball screw	[mm]	0,4 / 0,25	/ 0,25	
General data				
Profile size (width × height)	[mm]	55 × 55	68 × 68	
Operating temperature limits	[°C]	0 – +70	0 – +70	
Maximum duty cycle	[%]	100	100	
Lead screw diameters	[mm]	16	16, 20	
Protection class - standard / optional		IP54 / IP65	IP54 / IP65	
Features				
DC motor / Brushless AC servo motor / Three phase AC motor		• / • /	/ • /	
Single point lubrication			•	
Accessories				
Magnetic position sensors		•	•	
Mounting feet kit		•	•	
Trunnion mounting kit		•	•	
Clevis mounting kit		•	•	
Front / rear flange mounting kit		•	•	
Tube end - inside thread / outside thread / clevis / spherical joint		• / • / • / •	• / • / • / •	

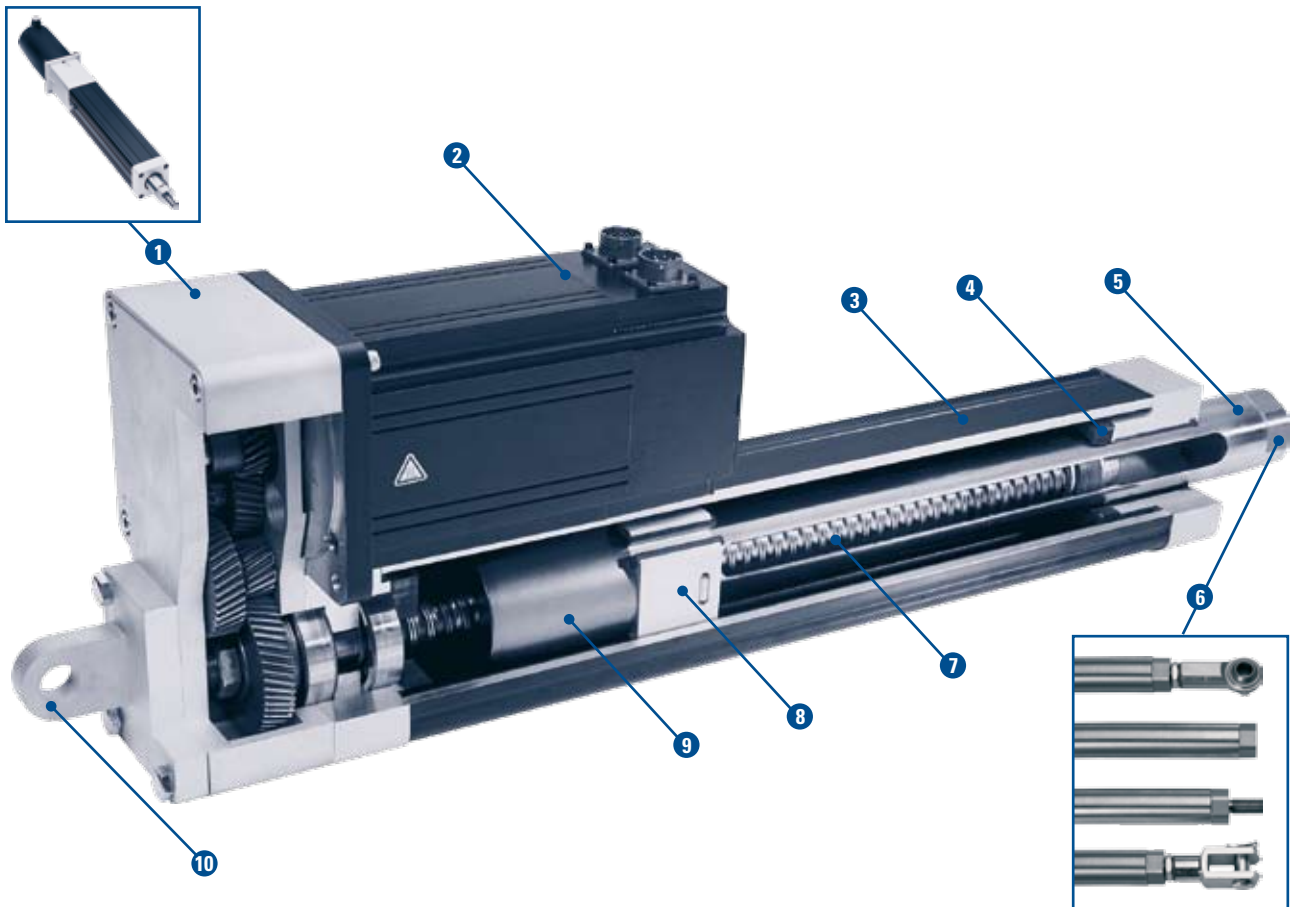
¹ Depending on the screw diameter used in the actuator.

EC4	EC5	ECT90	ECT130
			
12000	25000	20000	38000
0	0	500	800
0	0	500	800
10	10	-	-
0	0	150	300
0	0	150	300
1500	1500	1500	2000
1,33	1,33	1,6	2,0
0,013	0,013	0,05	0,05
/ 0,25	/ 0,3	/ 0,11 (0,18) ¹	/ 0,21
94 × 94	94 × 94	90 × 92	130 × 130
0 – +70	0 – +70	-20 – +70	-20 – +70
100	100	100	100
25	32	25, 32	40
IP54 / IP65	IP54 / IP65	IP65	IP65
/ • /	/ • /	/ • / •	/ • / •
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•		
• / • / • / •	• / • / • / •	• / • / /	• / • / /

Technical overview

The design of an electric linear actuator is quite basic. An electric motor – through either a timing belt, a gear drive or via in-line direct coupling – rotates a ball screw or acme screw, which translates the torque into axial force through the extension tube. While the concept is straight

forward, as illustrated by the cutaway on this page, significant expertise and development have been invested in the specification and design of each component. Each actuator is also built to meet the highest quality standards and are thoroughly tested before shipment.

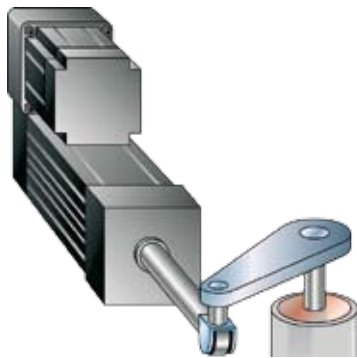


1. Parallel mounted motor with belt or helical gear or in-line motor with direct drive or planetary gear.
2. Permanent magnet DC motor, Brushless AC servo motor or three phase AC motor with or without integrated brake.
3. Stiff and strong extruded aluminium cover tube with integrated magnetic sensor grooves.
4. High quality extension tube seals protect the actuator from penetration of dust, dirt and liquids.
5. Robust stainless steel extension tube.
6. Choose between extension tube with inside or outside thread, clevis or spherical joint ends.
7. Acme or ball screw transmission.
8. Internally guided extension tube with anti-rotation mechanism which also acts as a screw support.
9. Shock load resistant acme nut or high-precision safety ball nut.
10. Mounting kits such as clevis, trunnion, mounting feet and front /rear flange available.

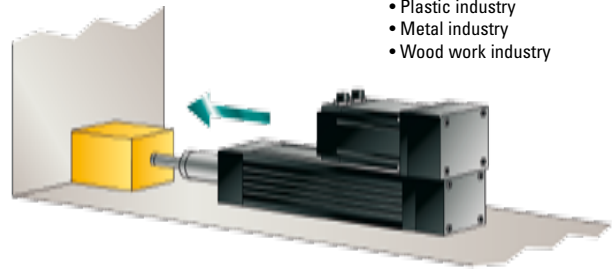
Applications

The Precision Linear Actuator range is used for many tasks in industry. Combining the actuators with controls and drives from Kollmorgen makes it easy to design linear motion equipment in a fast and simple way. Some of the most common applications are described below. Our

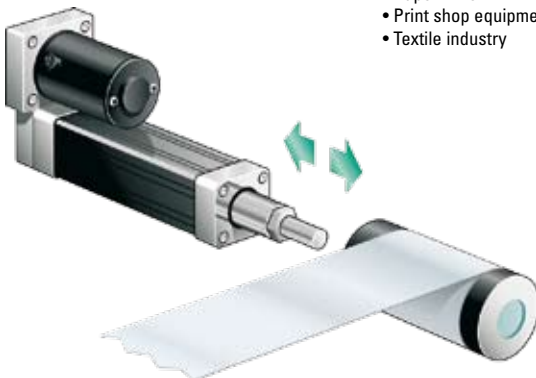
application engineers have a broad knowledge base built on decades of linear motion experience and they can help you find the ultimate solution for your application. They can also assist you with sizing and selection as well as with the design and commissioning of your equipment.



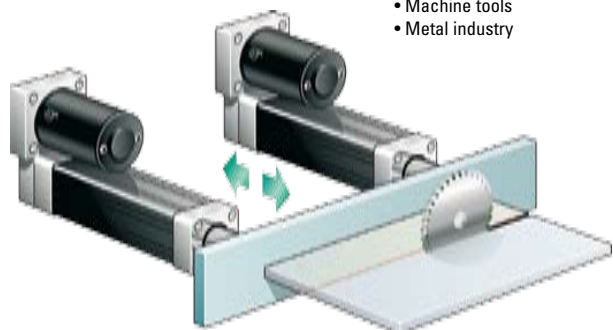
- Valve Control
- Process industry
 - Ventilation equipment
 - Vehicle applications
 - Packaging industry



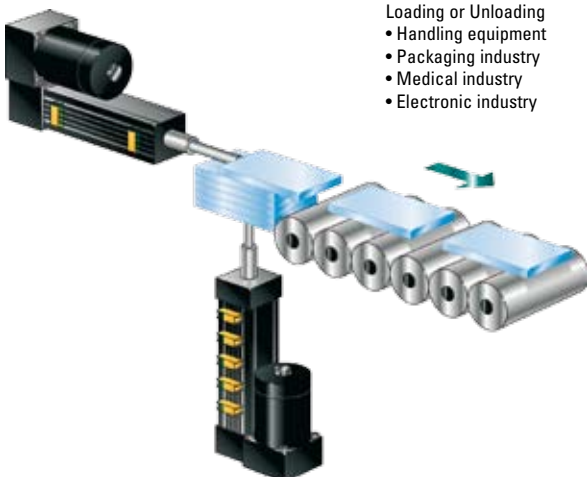
- Pressing and clamping
- Machine tools
 - Electronic industry
 - Plastic industry
 - Metal industry
 - Wood work industry



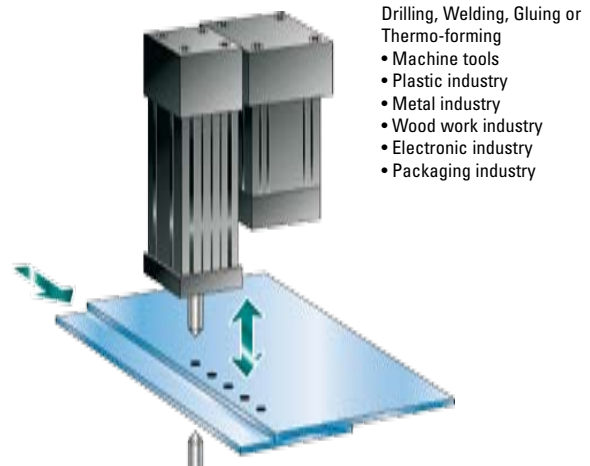
- Edge Guide Control
- Paper mills
 - Print shop equipment
 - Textile industry



- Backstop Adjust
- Wood work industry
 - Machine tools
 - Metal industry



- Loading or Unloading
- Handling equipment
 - Packaging industry
 - Medical industry
 - Electronic industry



- Drilling, Welding, Gluing or Thermo-forming
- Machine tools
 - Plastic industry
 - Metal industry
 - Wood work industry
 - Electronic industry
 - Packaging industry

EUROPE

United Kingdom

Danaher Motion
Chartmoor Road, Chartwell Business Park
Leighton Buzzard, Bedfordshire
LU7 4WG
Phone: +44 (0)1525 243 243
Fax: +44 (0)1525 243 244
E-mail: sales.uk@danahermotion.com

Germany

Danaher Linear GmbH
Nuertinger Strasse 70
72649 Wolfschlügen
Phone: +49 (0) 7022 504 0
Fax: +49 (0) 7022 504 405
E-Mail: sales.wolfschlügen@danahermotion.com

France

Danaher Motion
C.P 80018
12, Rue Antoine Becquerel – Z.I. Sud
F-72026 Le Mans Cedex 2
Phone: +33 (0) 243 50 03 30
Fax: +33 (0) 243 50 03 39
E-mail: sales.france@danahermotion.com

Italy

Danaher Motion srl
Largo Brughetti
I-20030 Bovisio Masciago
Phone: +39 0362 594260
Fax: +39 0362 594263
E-mail: info@danahermotion.it

Spain

Danaher Motion
Rbla Badal, 29-31 7th, 1st
08014 Barcelona
Phone: +34 (0) 9329 80278
Fax: +34 (0) 9329 80278
E-Mail: josep.estaran@danahermotion.com

Sweden

Danaher Motion
Box 9053
SE-291 09 Kristianstad
Phone: +46 (0) 44-24 67 00
Fax: +46 (0) 44-24 40 85
E-mail: sales.scandinavia@danahermotion.com

Switzerland

Danaher Motion SA
La Pierreire 2
1029 Villars-Ste-Croix
Phone: +41 (0) 21 631 33 33
Fax: +41 (0) 21 636 05 09
E-mail: info@danaher-motion.ch

USA, CANADA and MEXICO

Danaher Motion
203A West Rock Road
Radford, VA 24141 USA
Phone: 1-540-633-3400
Fax: 1-540-639-4162
E-mail: DMAC@danahermotion.com
Literature: LitRequest@danahermotion.com

ASIA

Asia Pacific

Danaher Motion (HK) Ltd
Unit A, 16 Floor, 169 Electric Road
Manulife Tower, North Point
Hong Kong
Phone: +852 2503 6581
Fax: +852 2571 8585
E-mail: victor.lim@danahermotion.com

China

Danaher Motion
Rm 2205, Scitech Tower
22 Jianguomen Wai Street
Beijing, China, 100004
Phone: +86 10 6515 0260
Fax: +86 10 6515 0263
E-mail: sales.china@danahermotion.com

India

Danaher Motion
Unit No 2, SDF 1 SeepzAnderi
Mumbai 400 096
Phone: +91 22 28294058
Fax: +91 22 28394036
E-mail: girish.mahajani@danahermotion.com

Japan

Danaher Motion Japan
2F, Tokyu Reit Hatchobori Bldg
2-7-1 Hatchobori Chuo-ku,
Tokyo 104-0032
Phone: +81-3-6222-1051
Fax: +81-3-6222-1055
E-mail: info@danahermotion.co.jp

