

## Linear Motion Solutions by Thomson

Trusted provider of optimized motion solutions for more than 70 years

# Thomson – Your Trusted Partner

Thomson invented anti-friction linear technology more than 70 years ago and has continued to lead the industry ever since. The Thomson brand is recognized as the global leader in motion technology.

Talk to us early in the design process to see how Thomson can help identify the optimal balance of performance, life and cost for your next application. Visit [www.thomsonlinear.com](http://www.thomsonlinear.com) and find a wealth of product and application information as well as 3D models, software tools, our distributor locator and global contact information.

## Unmatched Product Range

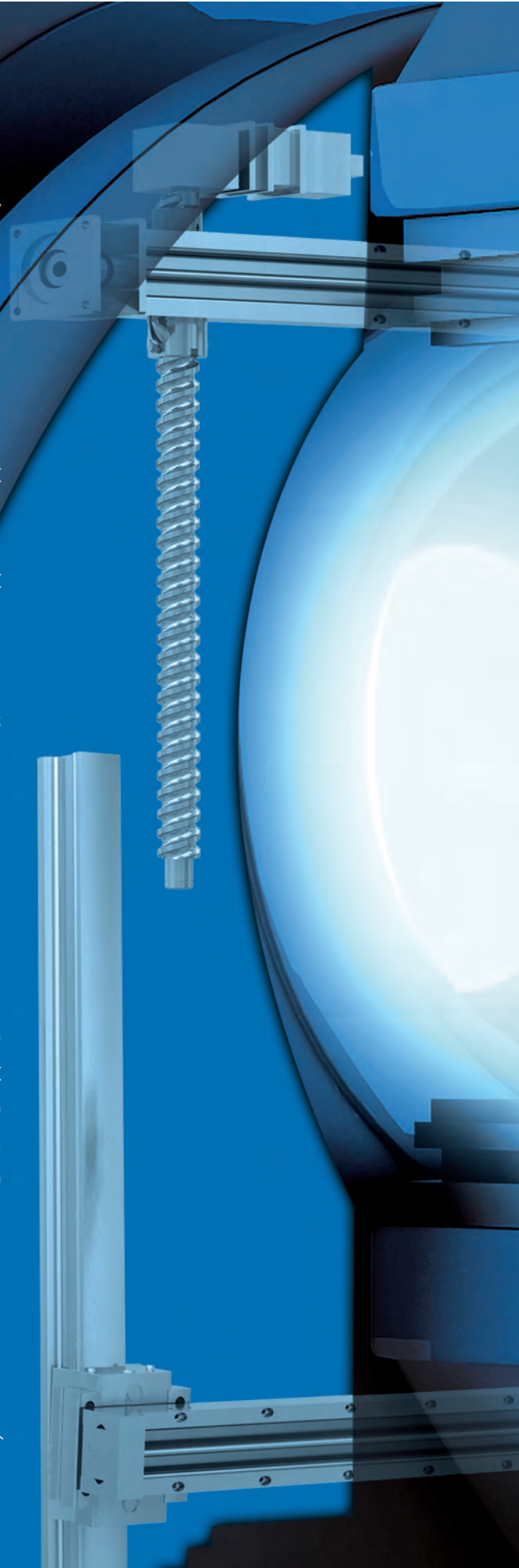
Over the past several years, our family of motion products has grown significantly and now includes BSA, Neff and Tollo – all now part of Thomson.



**THOMSON BSA**   **THOMSON TOLLO**   **THOMSON NEFF**

## Worldwide Service and Support

Thomson field service engineers and support teams are available to assist wherever and whenever they are needed. The broadest product offering and unbiased technology expertise enable us to bring you the optimal balance of performance, life and cost. That's why design engineers turn most often to Thomson products to meet their motion control requirements.





**THOMSON**<sup>®</sup>

*Linear Motion. Optimized.™*

[www.thomsonlinear.com](http://www.thomsonlinear.com)

## Linear Ball Bushing® Bearings and 60 Case® LinearRace® Shafting

Thomson invented the Linear Ball Bushing bearing more than 70 years ago and has since been the recognized leader in this field. Offering the widest range of bearings and accessories, we easily satisfy an even broader set of requirements with the best performing product for the application.

### RoundRail Linear Ball Bushing Bearings

- Most extensive product offering in the industry
- Pre-assembled, ready-to-install stages provide low friction and smooth, accurate motion
- Cutting-edge segmented technology

### 60 Case LinearRace Shafting

- Manufactured to the highest quality standards
- Life extends as much as 50% over the competition
- Available in a number of materials and coatings
- Custom machining capabilities



## Profile Rail Linear Guides

Thomson has a complete offering of rails and carriages in a broad range of styles and sizes and is a “one-stop shop” for all of your profile rail needs.

### Profile Rail 400 Series

- Wide product offering featuring double-faced ball bearing design in industry standard sizes

### Profile Rail 500 Series

- Exceptional straightness, rigidity, load capacity and accuracy

### MicroGuide® Series

- Miniature linear guides as small as 5 mm in 440C stainless steel

### T Series

- Lightweight rail made from aircraft-grade aluminum

### AccuMini

- Reduced friction to provide smooth, quiet operation at high speeds



## Ball Screws

We offer the most complete line of industrial ball screws. Our products range from standard to high-precision assemblies, as well as custom solutions.

### High Load Series

- Handles maximum dynamic loads up to 1440 kN

### Miniature Precision Rolled Series

- Efficient, cost-effective solution in a small envelope

### Precision Rolled Series

- The most comprehensive offering of low-cost, high-precision metric and inch ball screws in the industry

### Precision Plus Metric Ground Series

- High repeatability, accuracy and stiffness



## Lead Screws

Thomson offers the highest-quality, precision lead screw assemblies in the industry, providing an excellent economical solution for your linear motion requirements.

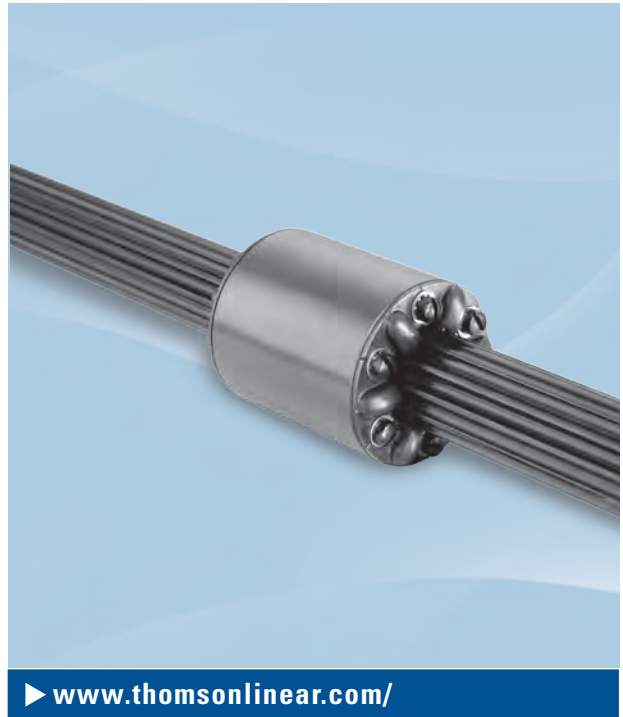
- Rolled precision stainless steel screws
- V-Threads available for fine positioning resolutions
- Lead nuts come in a standard threaded or flanged mounting configuration
- Anti-backlash nuts for the best positional repeatability
- Bronze nuts for heavy duty applications
- Custom lead screw machining and lead nuts available



## Ball Splines

Thomson precision ball spline systems feature high speed, anti-friction linear motion under high torsional loads, and have high reliability and predictable life expectancy. Ball splines resist radial displacements resulting from torque loads and require smaller forces to achieve axial displacement of the spline member while transmitting torque.

- Anti-friction linear travel by ball recirculation
- Resistance to radial displacement resulting from torque loads
- Minimal lash resulting from wear and elimination of stick-slip
- Minimized friction reduces heat, preventing seizure
- Custom machined keyways are available for both inner and outer race



## Glide Screws™

The Glide Screw combines the features of a linear bearing and a lead screw in one smooth operating package, thus creating something better than both. The patented Glide Screw delivers high performance, fast installation and less complexity in a small package.

- Easy and fast to install and maintenance free
- Reduced footprint, improved equipment uptime and lower cost of ownership
- Metric and inch options available
- Integrated lubrication block
- Optional configurations for harsh environments



## Linear Actuators

Our linear actuator range is one of the broadest on the market, and we can offer a suitable model for almost any imaginable application. Thomson also has a long experience in designing custom solutions and builds more custom actuators than anyone.

### Electrak® HD

- Industry-leading onboard electronics, including J1939
- Loads up to 16 kN and stroke lengths up to 1 m
- Unrivalled environmental protection (IP69K/IP67 static and IP66 dynamic)

### Electrak MD

- Compact sibling of the HD with outstanding power density, onboard controls and durability
- Loads up to 2 kN and speeds up to 52 mm/s

### Warner Linear H-Track

- Electrohydraulic actuator incorporates a patented fluid power design with unmatched impact resistance
- Completely sealed system with no hoses to leak



## Precision Linear Actuators

The compact design and higher load capacities of our precision linear actuators make them ideal for the replacement of hydraulic and pneumatic cylinders.

### T Series

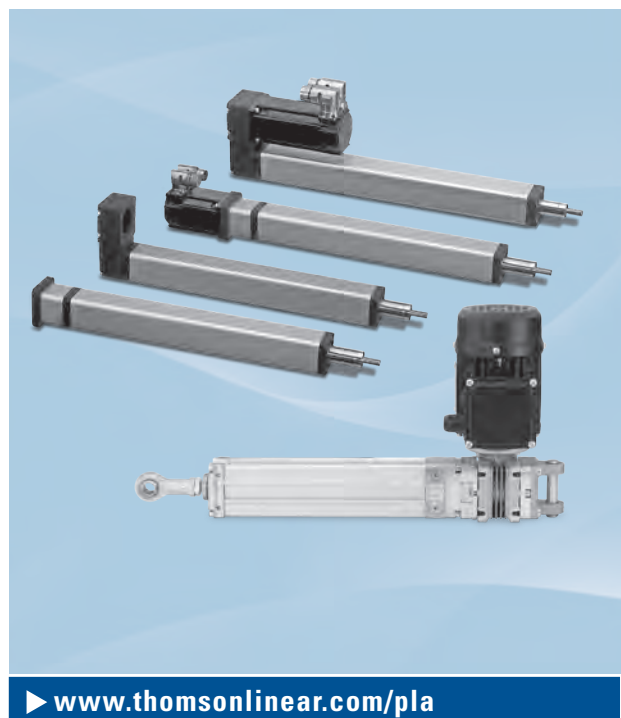
- Robust, precise-positioning, high-load actuators
- Three sizes and a multitude of accessories available
- Mounting kits according to hydraulic standards available

### ECT Series

- Fully motorized precision linear actuators
- Choose between a large number of motor, gear box and mounting alternatives

### PC Series

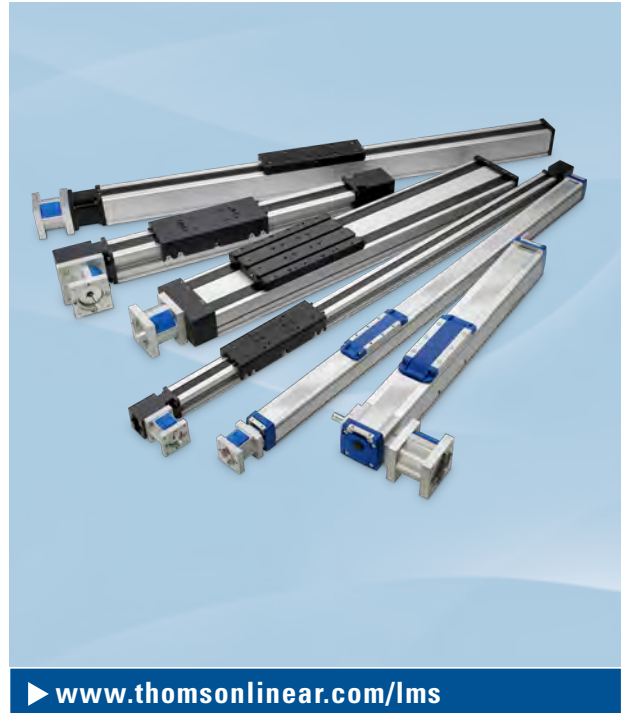
- Built to replace pneumatic cylinders
- High power density, accuracy and life expectancy
- Visit [www.thomsonlinear.com/conversion](http://www.thomsonlinear.com/conversion) to learn more about the PC Series



## Linear Motion Systems

Thomson invented the linear motion system and offers the largest range in the industry. These systems are ideal for handling, packaging and other factory automation applications that require high speed and/or long stroke capabilities.

- Flexibly designed, self-supporting units
- Can easily be assembled into X-Y and gantry configurations using multi-axis mounting accessories
- Sizes ranging from the smallest to the biggest in the industry
- Ball screw or belt-driven models
- Ball-, wheel- or prism-guided models
- RediMount™ motor mounting adapter kit is available as standard on all models
- Large range of options and accessories
- Sealing and washdown options are available for harsh environments



## Lifting Columns

Thomson lifting columns are ideal for medical applications such as wheelchair lifts, x-ray machines, and surgical tables as well as ergonomic automation applications such as workstations and desk lifts.

### LC2000 Series

- Three-piece extrusion with 2000 N loading capacity
- Telescoping leadscrew mechanism to provide an ideal extension-to-retraction ratio

### LC3000 Series

- Three-piece extrusion with ballscrew drive to allow for 3000 N loading capacity and high moment loading





## Stepper Motor Linear Actuators

Stepper motor linear actuators combine a hybrid stepper motor and a precision lead screw together in one compact envelope. Patented Taper-Lock technology\* allows quick decoupling and secure, properly aligned connections. This combination offers several advantages over a traditional solution.

- Motors come in five standard NEMA frame sizes with various stack and motor winding combinations available
- Many lead screw diameters, leads, coatings and lead nut combinations available
- Achieves the highest torque density in the industry
- Taper-Lock design provides the ability to quickly decouple the lead screw from the stepper motor
- Comes in three standard configurations: rotating screw (MLS), rotating nut (MLN) or actuator (MLA)
- Custom assemblies available

\* Patent No. 9400047



▶ [www.thomsonlinear.com/mls](http://www.thomsonlinear.com/mls)

## Worm Gear Screw Jacks

The Thomson worm gear screw jacks set new standards of precision and engineering and meet all of today's requirements for safety, cost-efficiency and durability.

### MULI® and JUMBO® Series

- Models for loads from 5 to 500 kN
- Designed for easy installation of motors, gears and shaft encoders
- All models designed for tensile and compressive loads
- Complete range of motors and accessories is available
- Synchronization of several jacks is easily accomplished



▶ [www.thomsonlinear.com/wgsj](http://www.thomsonlinear.com/wgsj)

## Miniature Systems and Components

Thomson produces the widest selection of miniature linear components that are engineered to work together. They all benefit from our long experience in motion control engineering and have all the advantages and features offered for standard-size products.

- Smaller components enable designers to reduce the size and weight of their end product, resulting in products that are smaller, lighter and less expensive to manufacture
- Widest variety of miniature motion products on the market
- Products are designed to work together
- Thomson offers easy and fast customization



## Precision Balls

For more than 70 years, our focus has been servicing precision industries with specialty and production runs of standard and non-standard balls. Our U.S.-based manufacturing, A2LA-accredited laboratory, technical center and warehouse are able to balance quality and delivery demands with competitive pricing and local service. We are your local, fast and flexible source for precision balls.

- Ideal for aerospace, automotive and industrial markets
- ISO 9001: 2015-registered
- ISO 17025 - A2LA-accredited laboratory



## Customization and White Paper Designs

Applications often have unique challenges that cannot always be solved by an off-the-shelf solution. Thomson specializes in providing custom-engineered solutions quickly and cost effectively to address these requirements. We frequently develop and ship products that have been altered in one or several ways such as:

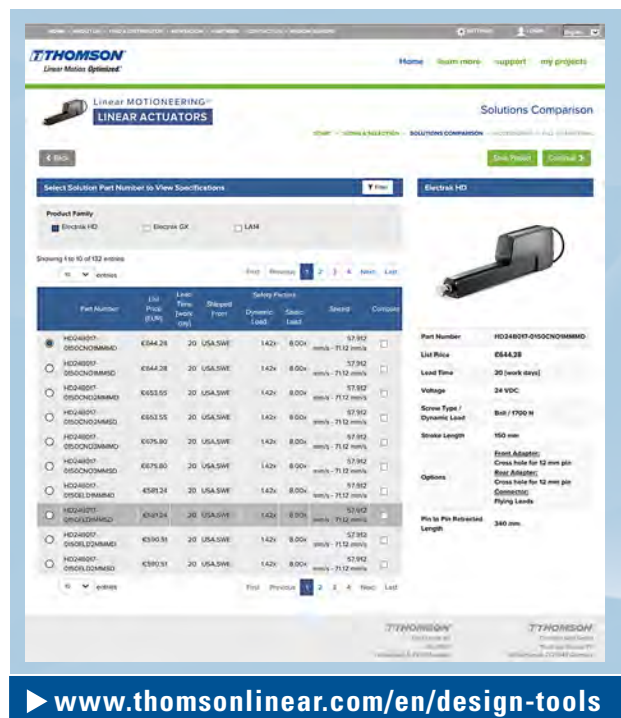
- Custom materials
- Custom surface treatment
- Custom size or geometry
- Custom assemblies
- Custom services
- New designs



## Online Sizing & Selection Tools and Design Resources

At Thomson, we provide world-class customer support by offering a wide variety of online application, selection and training tools. Together with our direct contact customer support center, we can help you find the product that best fits your application needs.

- Linear Motioneering - application tools for quick and easy sizing and selection
- Product Selectors - attribute-based selection tools help you search for product that best meets your application needs
- CAD Models - free configurable 2D/3D models are available to download for most of our products
- Training Site - here you can learn more about motion control and related products by studying our vast library of content, including graphics, videos and webinar recordings



## Innovation, Engineering and Customization Excellence

Often the ideal design solution is not about finding the fastest, sturdiest, most accurate or even the least expensive option. Rather, the ideal solution is the optimal balance of performance, life and cost.

Thomson continues to innovate, both in products and tools necessary for design engineers to select, size and specify the optimal component for any application – regardless of industry or market. From standard products to “white sheet” designs, Thomson has the engineering expertise and manufacturing capabilities to optimize the balance between performance and cost to suit your specific needs. Our engineered, custom designs, as well as our multitude of free, online tools, set us apart from other manufacturers and create a benchmark in the component industry.



▶ [www.thomsonlinear.com/materialhandling](http://www.thomsonlinear.com/materialhandling)

### Material Handling

Improve speed, accuracy and reliability by using the broad range of Thomson products in robots, manipulators, lifting aids and pick-and-place equipment.



▶ [www.thomsonlinear.com/medical](http://www.thomsonlinear.com/medical)

### Medical and Health

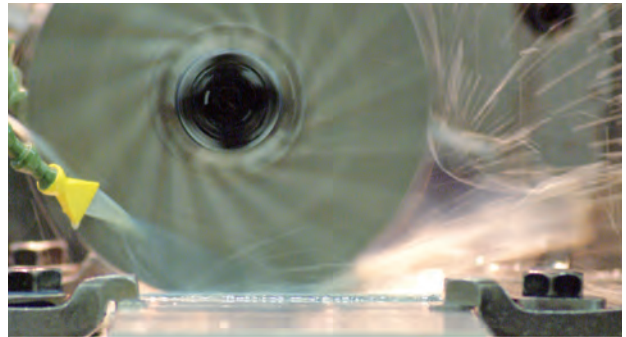
Both patients and caregivers will benefit from easier-to-use, safer, lighter, smaller and more precise machines made possible by Thomson products.



▶ [www.thomsonlinear.com/foodprocessing](http://www.thomsonlinear.com/foodprocessing)

### Food Processing

Our large range of washdown and non-contaminating components makes Thomson a perfect partner to the food processing industry.



▶ [www.thomsonlinear.com/machinetools](http://www.thomsonlinear.com/machinetools)

### Machine Tools

Thomson has supplied high-performance lead screws and linear guides to machine tool manufacturers for decades.

## Decades of Application Expertise

Since 1936, Thomson has been one of the forerunners in the motion technology industry. Our inventions and products have been supplying optimized motion solutions to a broad range of companies and application areas.

Thomson is the name you can trust for high-quality, innovation, on-time delivery, controlled costs and reduced risk regardless of your industry. With extensive experience in numerous industries, including mobile off-highway, medical and health, packaging, food processing, material handling, factory automation, clean energy, and machine tools, Thomson offers the widest selection of linear motion components designed to work together to provide the optimal solution for your specific application.



▶ [www.thomsonlinear.com/moh](http://www.thomsonlinear.com/moh)

### Mobile Off-Highway

Thousands of actuators – many of them customized – are delivered each year by Thomson to manufacturers of combines, tractors, bulldozers, trains and other vehicles.



▶ [www.thomsonlinear.com/packaging](http://www.thomsonlinear.com/packaging)

### Packaging

Packaging is a demanding market where Thomson can offer unique products that will improve quality and productivity while lowering manufacturing costs.



▶ [www.thomsonlinear.com/automation](http://www.thomsonlinear.com/automation)

### Factory Automation

Wherever you need to control a linear motion in a production process, Thomson has the broadest range of suitable products on the market.

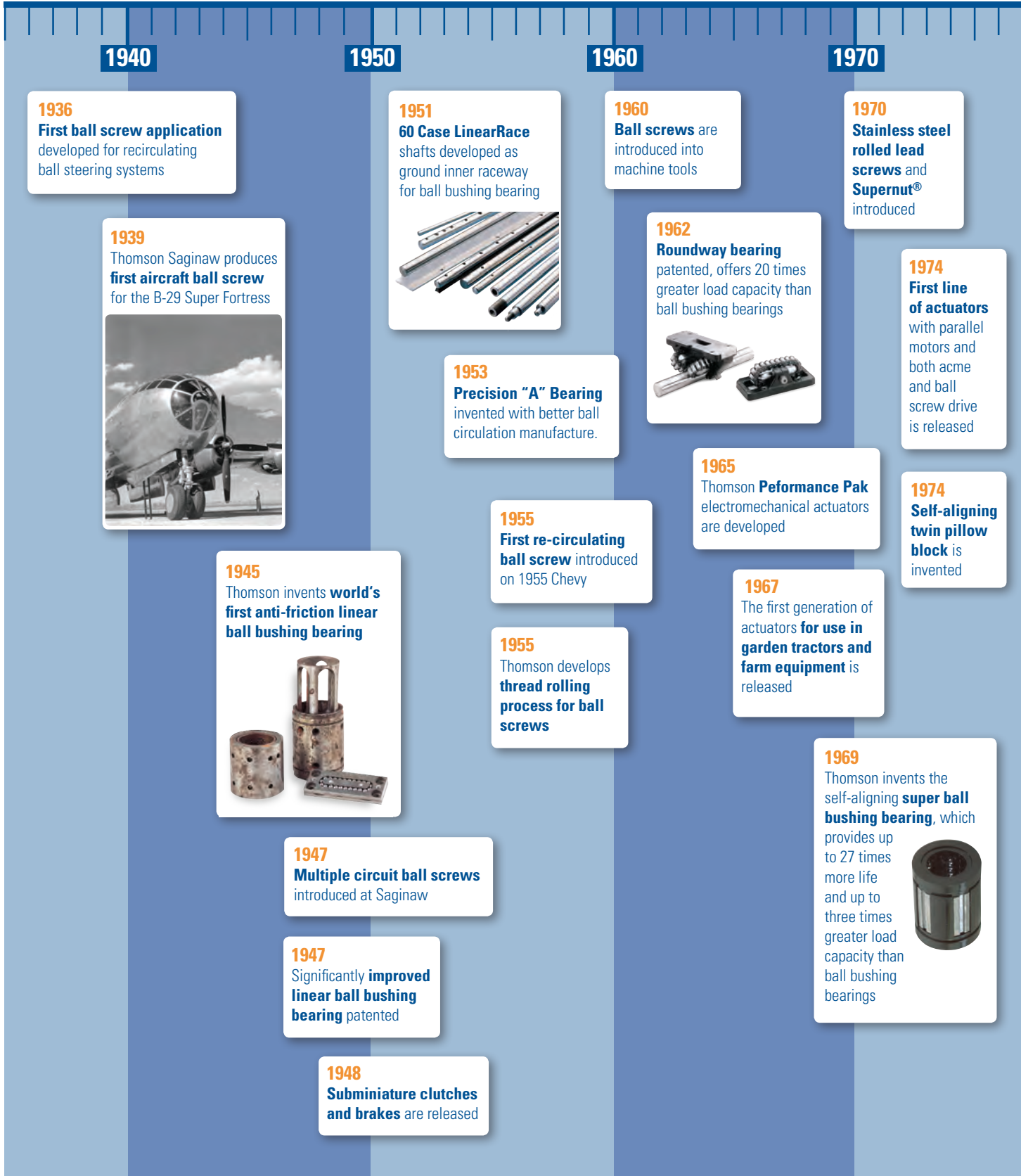


▶ [www.thomsonlinear.com/energy](http://www.thomsonlinear.com/energy)

### Clean Energy

The clean energy market is a fast-growing industry to which Thomson has been supplying standard and customized, high-quality products for many years.

# 70+ Years of Innovation, Quality and Trust in Motion Technology



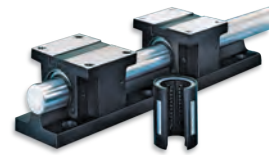
1980

**1980**  
Anti-backlash  
**Supernut®** products  
such as the SNAB, ASAB,  
TSAB and TAB launched

**1981**  
First **Wiesel linear motion system** presented at Fameta show in Stuttgart



**1981**  
Extra-rigid, 10 times more accurate **XR ball bushing bearing** patented



**1982**  
**Electrak line actuators** are released for OEMs

**1987**  
**Electrak 205** and the first line of **MCS controls** are released

**1989**  
Production starts on **first high-volume ABS IV ball screw** at 40,000 units/day

1990

**1993**  
Super Smart Ball Bushing Bearing is invented – **216 times the life and six times the load capacity** of a conventional bearing

**1995**  
**Lightweight titanium screw** developed for space flight

**1997**  
**Movopart 2<sup>nd</sup> generation linear motion systems** released

**1998**  
The **XC advanced anti-backlash nut with ActiveCAM®** is released



**2000**  
The first **LM80 rodless actuator** is released

2000

**2004**  
**Gen IV wipers** developed for harshest environmental conditions

**2004**  
**500 Series** introduced



**2004**  
**MLSM and MLSH** product line released



**2004**  
**T Series** precision linear actuators released



**2010**  
**400 Series linear guide** introduced



2010

**2013**  
**Glide Screw™**, a combined lead screw and guide, is invented



**2013**  
**Electrak Throttle** released



**2013**  
**Max Jac** heavy duty actuator released

**2014**  
**PC Series** precision linear actuators released



**2014**  
**Motorized Lead Screws** released



**2014**  
**LC Series lifting columns** released



**2016**  
**Electrak HD** electric linear actuator released



**2018**  
**RediMount** motor mounting system released on Linear Motion Systems and Precision Linear Actuators product lines



## **USA, CANADA and MEXICO**

Thomson  
203A West Rock Road  
Radford, VA 24141, USA  
Phone: +1 540 633 3549  
Fax: 1 540 633 0294  
E-mail: [thomson@thomsonlinear.com](mailto:thomson@thomsonlinear.com)  
Literature: [literature.thomsonlinear.com](http://literature.thomsonlinear.com)

## **EUROPE**

### **United Kingdom**

Thomson  
Office 9, The Barns  
Caddsdawn Business Park  
Bideford, Devon, EX39 3BT  
Phone: +44 1271 334 500  
E-mail: [sales.uk@thomsonlinear.com](mailto:sales.uk@thomsonlinear.com)

### **Germany**

Thomson  
Nürtinger Straße 70  
72649 Wolfschlugen  
Phone: +49 7022 504 403  
Fax: +49 7022 504 405  
E-mail: [sales.germany@thomsonlinear.com](mailto:sales.germany@thomsonlinear.com)

### **France**

Thomson  
Phone: +33 243 50 03 30  
Fax: +33 243 50 03 39  
E-mail: [sales.france@thomsonlinear.com](mailto:sales.france@thomsonlinear.com)

### **Italy**

Thomson  
Via per Cinisello 95/97  
20834 Nova Milanese (MB)  
Phone: +39 0362 366406  
Fax: +39 0362 276790  
E-mail: [sales.italy@thomsonlinear.com](mailto:sales.italy@thomsonlinear.com)

### **Spain**

Thomson  
E-mail: [sales.esm@thomsonlinear.com](mailto:sales.esm@thomsonlinear.com)

### **Sweden**

Thomson  
Estridsväg 10  
29109 Kristianstad  
Phone: +46 44 24 67 00  
Fax: +46 44 24 40 85  
E-mail: [sales.scandinavia@thomsonlinear.com](mailto:sales.scandinavia@thomsonlinear.com)

## **ASIA**

### **Asia Pacific**

Thomson  
E-mail: [sales.apac@thomsonlinear.com](mailto:sales.apac@thomsonlinear.com)

### **China**

Thomson  
Rm 805, Scitech Tower  
22 Jianguomen Wai Street  
Beijing 100004  
Phone: +86 400 606 1805  
Fax: +86 10 6515 0263  
E-mail: [sales.china@thomsonlinear.com](mailto:sales.china@thomsonlinear.com)

### **India**

Thomson  
c/o Portescap India Pvt Ltd  
1 E, first floor, Arena House  
Road no 12, Marol Industrial Area,  
Andheri (E), Mumbai 400093 India  
E-mail: [sales.india@thomsonlinear.com](mailto:sales.india@thomsonlinear.com)

### **Japan**

Thomson  
Minami-Kaneden 2-12-23, Suita  
Osaka 564-0044 Japan  
Phone: +81 6 6386 8001  
Fax: +81 6 6386 5022  
E-mail: [csjapan@scgap.com](mailto:csjapan@scgap.com)

### **South Korea**

Thomson  
3033 ASEM Tower (Samsung-dong)  
517 Yeongdong-daero  
Gangnam-gu, Seoul, South Korea (06164)  
Phone: + 82 2 6001 3223 & 3244  
E-mail: [sales.korea@thomsonlinear.com](mailto:sales.korea@thomsonlinear.com)

## **SOUTH AMERICA**

### **Brasil**

Thomson  
Av. João Paulo Ablas, 2970  
Jardim da Glória - Cotia SP - CEP: 06711-250  
Phone: +55 11 4615 6300  
E-mail: [sales.brasil@thomsonlinear.com](mailto:sales.brasil@thomsonlinear.com)