



Mechanical Motion Solutions.

Manufacturing the optimal balance of performance, life and cost for over 60 years.



Linear Motion. Optimized.

Thomson -
Linear Motion. Optimized.

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 is best positioned to help you most quickly configure the optimal linear motion solution for your application.

- Thomson invented anti-friction linear bearing technology. We own the broadest standard product offering of mechanical motion technologies in the industry.
- Modified versions of standard product are routine. White sheet design solutions available across our entire portfolio.
- Choose Thomson and gain access to over 70 years of global application experience in diverse industries including packaging, factory automation, material handling, medical, clean energy, printing, automotive, machine tool, aerospace and defense.
- As part of Danaher Corporation, we are financially strong and unique in our ability to bring together control, drive, motor, power transmission and precision linear motion technologies.

Thomson is the name you can trust for quality, innovation, on-time delivery, controlled costs, and reduced risk.

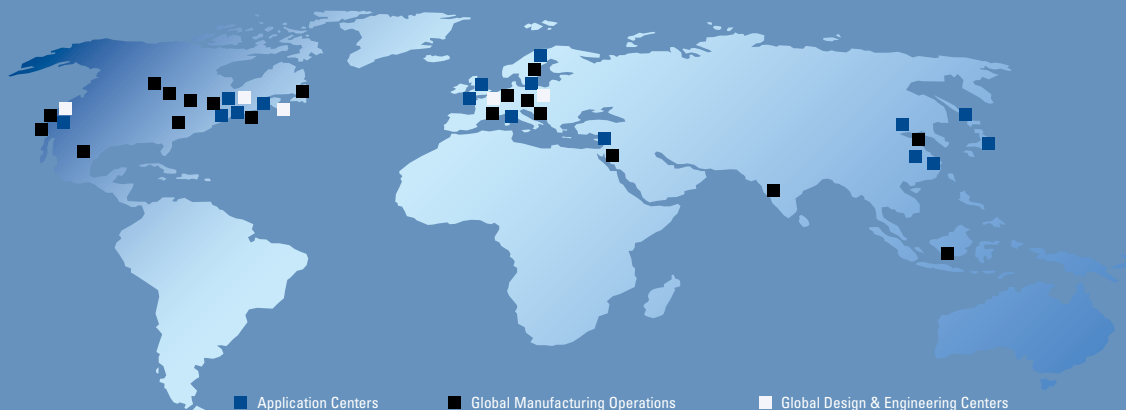
In addition to the information contained in this document, a wealth of product and application information is available online at www.thomsonlinear.com. Also online are downloadable 3D models, software tools, our distributor locator and global contact information for Thomson. For immediate assistance in North America contact us at 1-540-633-3549 or email us at thomson@thomsonlinear.com.

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. And, call us or any of our 2000+ distribution partners around the world for fast delivery of replacement parts.

The Danaher Business System -
Building sustainable competitive advantage into your business

The Danaher Business System (DBS) was established to increase the value we bring to customers. It is a mature and successful set of tools we use daily to continually improve manufacturing operations and product development processes. DBS is based on the principles of Kaizen which continuously and aggressively eliminate waste in every aspect of our business. DBS focuses the entire organization on achieving breakthrough results that create competitive advantages in quality, delivery and performance – advantages that are passed on to you. Through these advantages Thomson is able to provide you faster times to market as well as unsurpassed product selection, service, reliability and productivity.

Local Support Around the Globe
Application Centers Global Manufacturing Operations Global Design & Engineering Centers



Thomson – the name you can trust

Thomson invented anti-friction linear technology over 60 years ago and has continued to lead the industry ever since. The Thomson brand is recognized and trusted as the global leader in linear motion technology.

Since 2002 when Thomson was acquired by Danaher Corporation, our product range has grown significantly. Our family of linear and mechanical motion products also includes BSA, Neff, Tollo, Micron, Deltran and Cleveland - all now part of Thomson.



With a world-wide service and support infrastructure, Thomson field service engineers and support teams are available to assist 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.

From standard products to "white paper" designs, we have the expertise and manufacturing capabilities to optimize the balance between performance and cost to suit your specific application. Our engineered, custom-designs for proprietary equipment set us apart in the industry.



Packaging



Medical



Mobile-Off-Highway



Military and Defense

Linear Ball Bushing® Bearings and 60 Case® LinearRace Shafting

Thomson invented the ball bushing bearing over 60 years ago and has since been the recognized leader in this field. Our linear products provide low friction, smooth, accurate, straight-line motion. Offering the widest range of bearings and accessories, we easily satisfy the widest range of requirements with the best performing product for the application.

RoundRail™ Linear Ball Bushing Bearings

- Most extensive product offering in the industry
- Cutting-edge segmented technology
- Over 60 years of product innovation & unparalleled service

60 Case LinearRace Shafting

- 60 Case LinearRaceShafting service life extends as much as 50% over the competition, when used with Thomson Ball Bushing Bearings
- Available in a number of proprietary materials and coatings
- Diameters from 1/8 to 4 inches and 5 to 80 mm
- Lengths to 25 feet (7.6 m)
- Custom machining capabilities – drive shafts, spindles, guide rods, rolls, etc.



Profile Rail Linear Guides

We are a “one-stop shop” for all your profile rail needs and offer the ultra-lightweight T-Series, the compact stainless steel MicroGuide, the ultra-rigid 500 Series Roller and the new cost-effective Profile Rail 400 Series.

Profile Rail 400 Series:

- Metric sizes from 15 to 45 mm in 5 mm increments
- Double-faced ball track bearing for simple installation
- Load capacity up to 129 kN.
- Up to 30% noise reduction compared to standard ball cages

Profile Rail 500 Series:

- Metric sizes ranging from 5 to 65 mm
- Load capacities up to 530 kN
- Exceptional straightness and high rigidity
- High dynamic, static and moment load capacities



Industrial Ball Screws

Thomson offers the most complete line of industrial ball screws in the industry - offering assemblies in both inch and metric diameters and leads as well as an extensive selection of accessories. Our broad product offering combined with years of application expertise allows us to provide the right solution to meet your unique application requirements.

Inch Series Ball Screws:

- Diameters from 0.187 to 6.000 inch
- Leads from 0.050 to 2.0 inch
- Precision screw accuracy to +/- 0.004 in/ft
- Precision Plus screw accuracy to +/- 0.0005 in/ft

Metric Series Ball Screws:

- Diameters from 4 to 160 mm
- Leads from 1 to 50 mm
- Precision screw accuracy to +/- 23 microns / 300 mm
- Precision Plus screw accuracy to +/- 12 microns / 300 mm

Worm Gear Screw Jacks:

- Lifting capacities from 1,100 to 110,000 lb (5 kN to 500 kN)
- Ball screw or lead screw driven; up to 57% efficiency



Specialty Ball Screws and Components

Thomson specialty ball screw products have been used in nuclear power applications for the last 30 years. Thomson is also a leader in ball screws for aerospace and defense with an history and expertise stretching from the first ball screw in an aviation application, Boeing B29, to seeker gimbal stabilization in modern missiles. Our team of engineers leverage our 70+ years of research, including over 100 ball screw technology patents, in order to meet our customers' requirements.

- Enhanced features such as load lock safety mechanisms, lubrication reservoirs, and quiet running return systems are available
- Redundant load systems and patented wiper designs promote maximum reliability
- Certified manufacturing, inspection, and testing procedures ensure the highest levels of quality



Lead Screws

The “just right” solution for many linear positioning applications, our lead screws are available in standard and precision grades to meet your requirements. Patented zero-backlash nut technology provides excellent repeatability with high stiffness and extremely low drag torque.

- Polymer anti-backlash nut technology
- Precision stainless steel screws, Imperial diameters from 0.1875 to 3 inch (5 to 76 mm), Metric diameter from 6 to 24 mm (0.25 to 0.75 inch)
- Leads from .01 to 2 inch (0.25 to 50 mm)
- Load ratings from 5 to 400 lb (22 to 1,800 N) for polymer nuts
- Lead accuracies to 0.003 in/ft (76 micron/300 mm)



Linear Motion Systems

Linear Motion Systems are the best choice for material handling and other factory automation applications that require high speed and/or long stroke capabilities. Modular, self-contained and self-supporting, they are easily assembled into X-Y and gantry configurations.

- Designed for machining, packaging, assembly and material handling applications
- Ball screw or belt driven with ball guide, wheel guide and prism guide linear bearing
- Speed up to 10 m/s (33 ft/s)
- Load up to 40 kN (9,000 lb)
- Stroke up to 12 m (39 ft)
- Sealing and washdown options are available for harsh environments
- Low maintenance - often available with single point lubrication



Linear MOTIONEERING
Sizing and Selection Tool
www.linearmotioneering.com

Positioning Slides

Our positioning slides can be used virtually anywhere. They can support and move a range of loads and provide high precision and tight tolerances.

- Pre-engineered, pre-assembled, ready to install
- Load bearing support with either RoundRail or ProfileRail linear guides
- Actuation with either ball screw, lead screw or belt drive
- Support 2D or 3D move profiles with multi-axis configurations
- Loads from 20N to 30 kN (5 to 6,700 lb)
- Speeds up to 3 m/s (10 ft/s)
- Both inch and metric dimensions
- Available with stepper or servo motor and control packages
- Complete turnkey systems available
- RediMount System allows Thomson slides to be easily mounted to a variety of motors, not just NEMA standards.



Precision Linear Actuators

The compact design and higher load capacities of our precision linear actuators make them ideal for flexible integration in tight areas. These programmable precision linear actuators are available in a wide range of voltage, thrust, stroke and mounting configurations.

- Designed for high speed, high load, continuous operation
- Stroke up to 2 m (6.5 ft)
- Load up to 40 kN (9,000 lb)
- Speed up to 2.5 m/s (8 ft/s)
- Compact design for small envelope
- Available with stepper, servo or DC motor
- Controls available for all unit
- Complete turnkey systems available

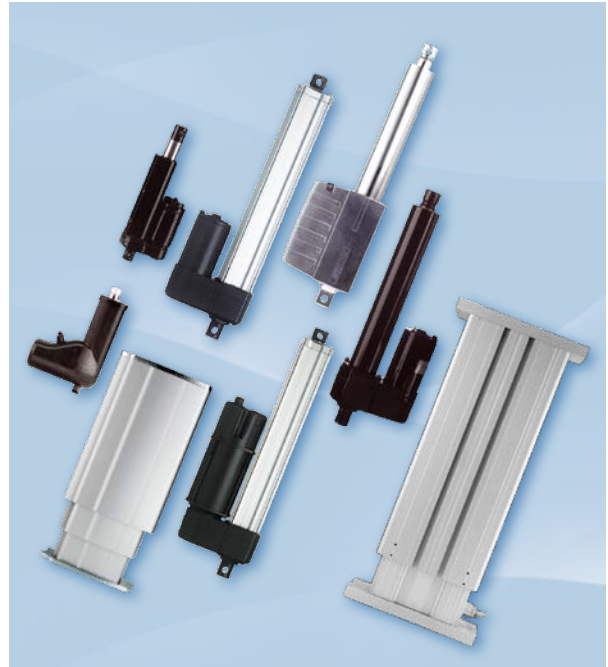


Linear Actuators

Our linear actuators are designed for rugged, reliable linear motion applications. Numerous choices in stroke, load, motor type, feedback, limits, and control options make these linear actuators very versatile.

And if you can't find the actuator to meet your application needs, call us for an actuator built to your needs. We build more custom actuators than anyone.

- Strokes from 25 to 1500 mm (1 to 59 inch)
- Loads from 110 to 9000 N (25 to 2,000 lb)
- Speeds from 5 to 75 mm/s (0.2 to 3 in/s)
- Voltages - 12, 24, 36 Vdc and 1 × 230 / 3 × 400 Vac
- More power in a smaller envelope
- Outdoor and indoor applications, IP67
- Maintenance free
- Holds load with power off
- Available with overload clutches, limit switches, feedback and a whole range of other options and features



True Planetary™ Gearheads

We offer a complete line of True Planetary™ gearheads to complement all of our servo and step motor products.

- UltraTRUE Helical Crowned True Planetary Gearheads, smoothest operating on the market
- ValueTRUE Helical Crowned True Planetary Gearhead, High performance at a low cost
- DuraTRUE Planetary Gearheads, ideal alternative to hybrid parallel-shaft spur gearheads
- NemaTRUE Planetary Gearheads, optional front faces
- EverTRUE continuous duty, higher speeds and lower temperature
- XTRUE Planetary Gearheads, an economical, precision design
- AquaTRUE Planetary Gearheads, stainless steel housing and output shaft, IP66, 67 or 69K protection



AquaTRUE Watertight Gearhead

www.micronmotioneering.com

Clutches & Brakes

Thomson has over 100 years of experience of manufacturing quality clutches and brakes. Today, our clutch and brake products are working in a wide range of applications and almost all types of products.

Wrap Spring Products:

- CB Series combination clutch brakes accurately start and stop loads driven by a continuously rotating power source
- Product families include solenoid actuated SAC series, random start stop DL & MAC series, mechanically actuated PSI series and other custom engineered packages

Friction Products:

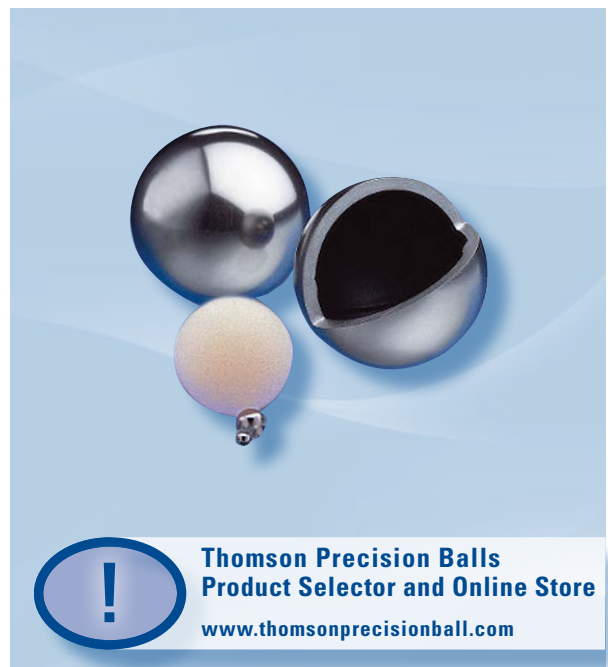
- Spring set brakes for static holding and dynamic stopping are available for a variety of applications
- Product families include power on and power off friction, multiple disc, tooth, spring set, and custom packages.
- Torque ranges from less than 0.1 to over 500 Nm (1 in-lb to over 370 ft-lb)
- ISO9000:2001 and AS9100 Certified Bookmark, RoHS Compliant.



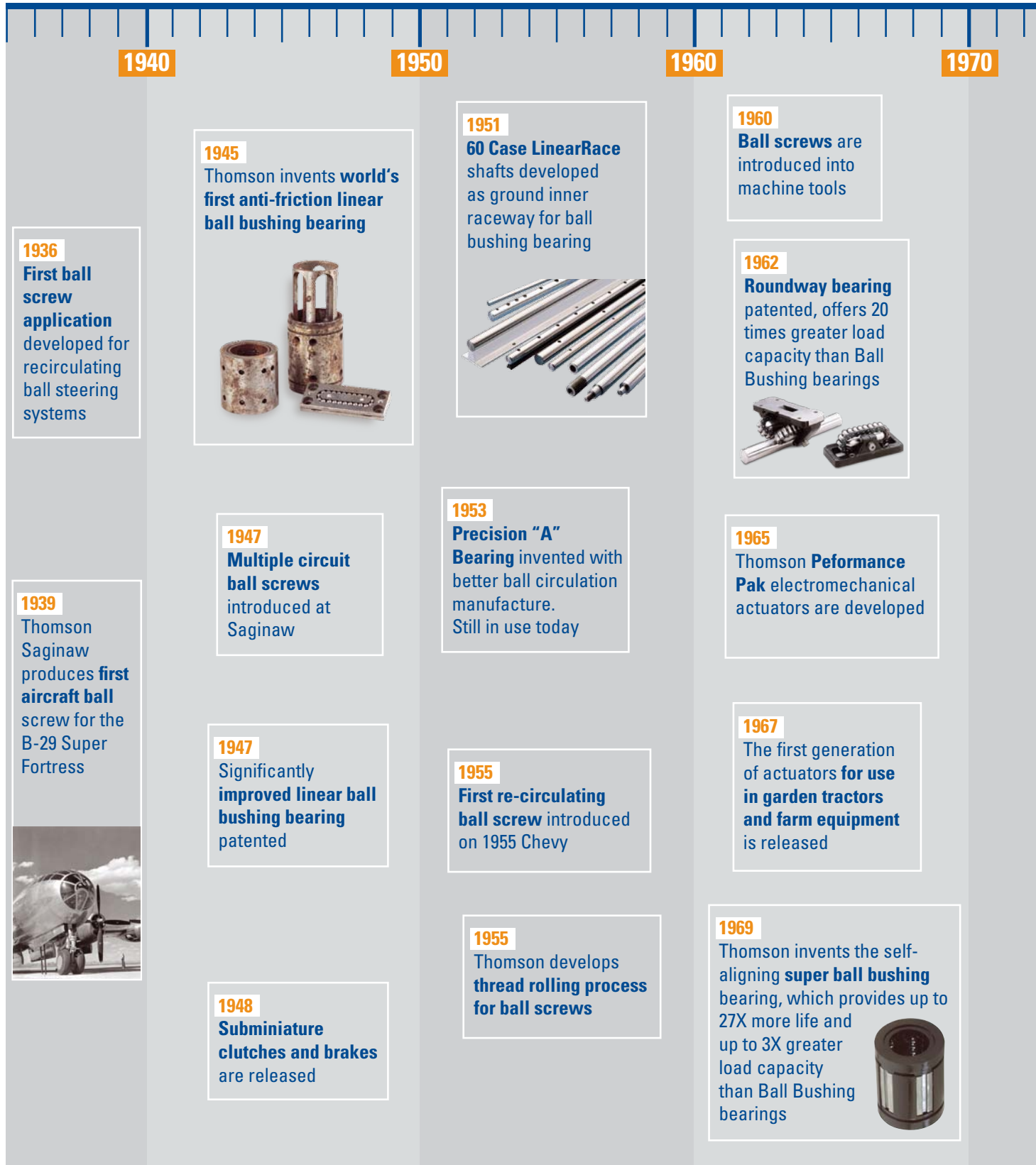
Precision Balls

Our precision balls offer sphericity within 5 millionths of an inch, 100% quality inspection and are guaranteed to meet or exceed the standards of the American Bearing Manufacturing Association.

- Most complete variety of materials & technologies
- Over 27 high performance materials
- Ceramic, hollow and specialty balls
- ISO9001:2000 registered
- A2LA Certified measuring Lab



Over 60 Years of Innovation, Quality and Trust in Linear Motion



1980

1970
Stainless steel rolled lead screws and Supernut® introduced

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



1990

1993
Super Smart Ball Bushing Bearing is invented. 216x the life or 6x the load capacity of a conventional Bearing

1995
Lightweight titanium screw developed for space flight

2000

2000
The first LM80 rodless actuator is released

2004
Gen IV wipers developed for maximum environmental conditions

2004
500 Series introduced



2004
MLSM and MLSH product line released



2007
The Electrak Pro actuator line and the DCG control line are released



2007
AKB Series Spring Set Brakes are released

2010
400 Series Linear Guide introduced

2010
AquaTRUE food grade planetary gearhead series is released



1974
First line of actuators with parallel motors and both acme and ball screw drive is released

1981
Extra-rigid 10X more accurate XR ball bushing bearing patented



1996
Micron develops the RediMount, the most flexible mounting system in the world



1997
Micron develops the first helical crowned true planetary gearhead in the UltraTRUE

1998
Released the XC advanced anti-backlash nut with ActiveCAM®

1974
Self-aligning twin pillow block is invented

1982
The Tiger 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 per day

1980
Launched anti-backlash Supernut® products such as the SNAB, ASAB, TSAB, and TAB

USA, CANADA and MEXICO

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