



Power Transmission, Motion Control and Engine Braking Solutions





Altra Motion



Premier Industrial Company Leading Brands

Ameridrives

Bauer Gear Motor

Bibby Turboflex

Boston Gear

Delevan

Delroyd Worm Gear

Formsprag Clutch

Guardian Couplings

Huco

Jacobs Vehicle Systems

Kilian

Kollmorgen

Lamiflex Couplings

Marland Clutch

Matrix

Nuttall Gear

Portescap

Stieber

Stromag

Svendborg Brakes

TB Wood's

Thomson

Twiflex

Warner Electric

Wichita Clutch

Altra is a leading global designer and producer of a wide range of electromechanical power transmission and motion control components and systems. Providing the essential control of equipment speed, torque, positioning, and other functions, Altra products can be used in nearly any machine, process or application involving motion. From engine braking systems for heavy duty trucks to precision motors embedded in medical robots to brakes used on offshore wind turbines, Altra has been serving customers around the world for decades.

Our products are marketed under a variety of well recognized and established brands which, on average, have been in existence for over 85 years. Each of our companies are committed to the guiding principles of the Altra Business System, with relentless focus on continuous improvement and customer satisfaction.

Altra's Core Values



We win as aligned, capable, and engaged teams

We are committed to providing a secure workplace that develops and leverages the capabilities of our people and encourages their diversity of thought.



Customers inspire our innovation

We relentlessly seek to better understand our customers' needs and create product and process innovations to help them differentiate.



Go and see is how we lead

We connect directly to the work; we solve problems and make decisions based on knowledge gained from direct process observation.



Continuous improvement is our way of life

We challenge ourselves and our partners to continuously improve as we seek to consistently outperform our competition and exceed our customers' expectations.



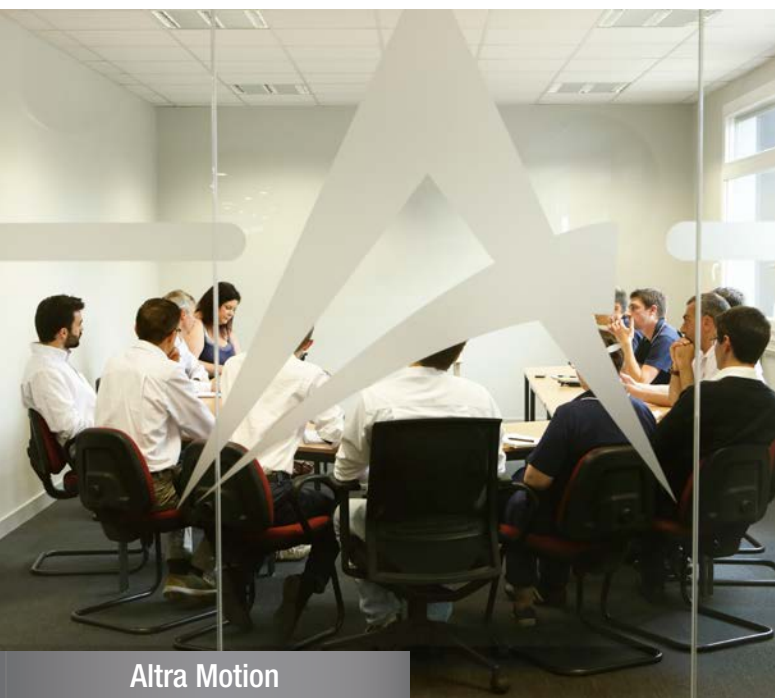
We deliver exceptional value to our stakeholders, communities, and society

We gain our stakeholders' trust by consistently delivering above-market returns while operating with the highest standards of integrity and engaging proactively to make our local communities better.



The Altra Business System

The Altra Business System is a framework of concepts and methods for driving sustainable competitive advantage. Focusing on a set of Core Value Drivers that reflect our priorities related to Customers, Shareholders, and Associates, we work ceaselessly to improve the flow of value to our customers. We do this by teaching our Associates to utilize a robust set of tools and processes to systematically identify and eliminate waste. This assures that we provide our Customers with innovative solutions at the shortest lead time, highest quality and best possible value. And this leads to consistent, above-market returns to our Shareholders and a work environment that fully stimulates and develops the capabilities of our Associates.



Altra Motion





Altra Motion

Global Presence Local Support

With sales, service, and manufacturing facilities in more than 20 different nations across five continents, combined with industry leading distribution channels, our expanding global presence allows us to provide exceptional customer service and support worldwide.

- Total coverage in over 70 countries
- 48 manufacturing locations worldwide
- Over 400 direct sales experts and 600 product & software engineers

- ★ Altra Headquarters
- Altra Engineering & Service Centers
- Altra Manufacturing Facilities





A Global Footprint to Support Customers Around the World

www.altramotion.com



Expertise

Altra Brands Deliver Value

Expertise in standard, modified and custom engineered products, backed by the most recognized brands in the power transmission motion control industry.

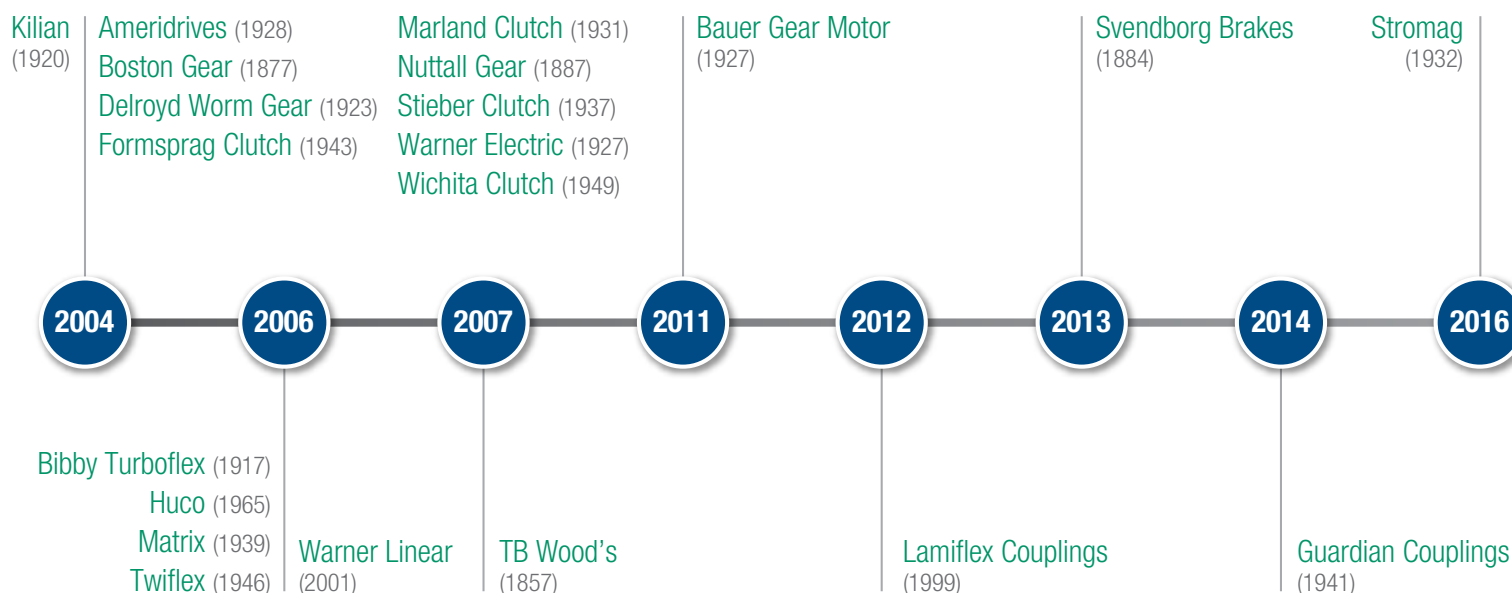
Altra's five main product groups - clutches & brakes, couplings, gearing & specialty components, linear systems and precision motors, drives & controls are backed by over 25 of the industry's leading brands. On average, our brands have been in operation for over 85 years. The industry knowledge and application expertise developed during this period enables us to deliver unique solutions tailored to meet the most rigorous customer demands.

Altra Motion

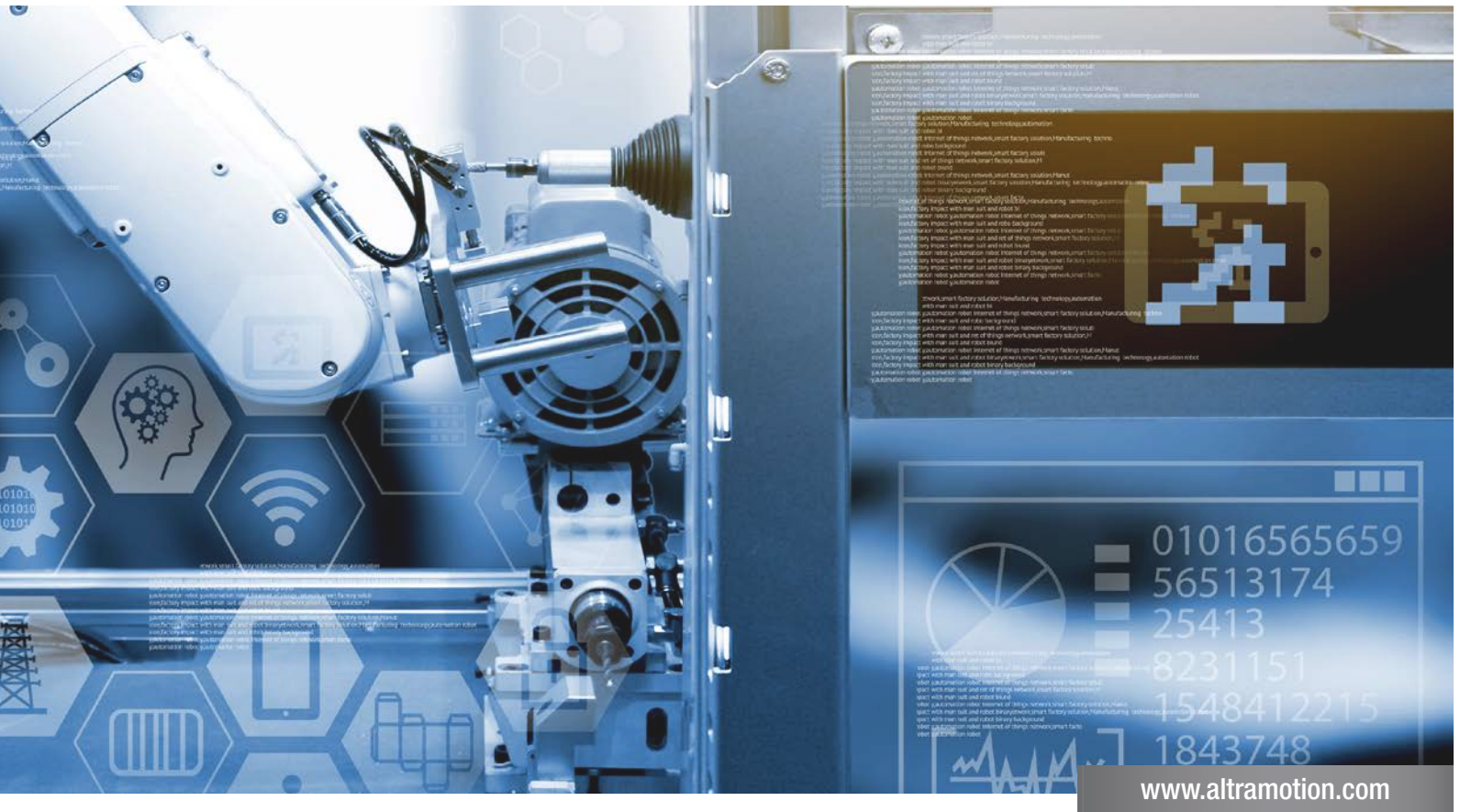


A History of Successful Mergers and Acquisitions with a Proven Track Record of Consistent Growth

Industry leading brands uniquely positioned to drive innovation, accelerate growth and build value for customers. A premier industrial company driven by the relentless pursuit of continuous improvement and customer satisfaction.



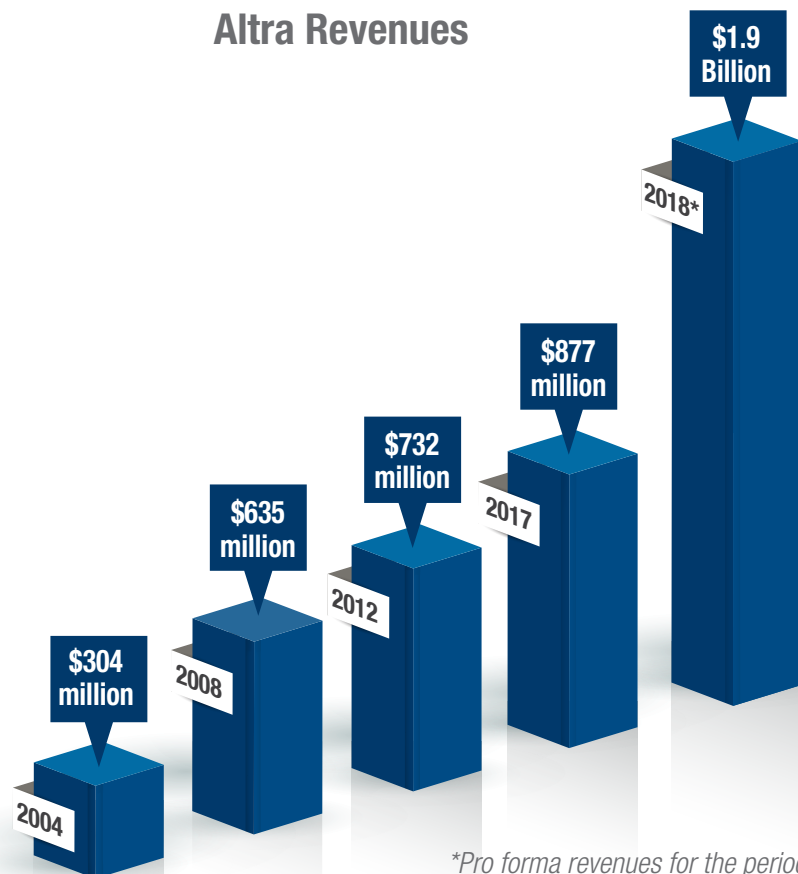
(Indicates Year Founded)



Altra Revenues

Delevan (1947)
Jacobs Vehicle Systems (1961)
Portescap (1931)
Kollmorgen (1916)
Thomson (1940)

2018



**Pro forma revenues for the period ending December 31, 2018*



Altra Motion



Electric Clutches & Brakes

- Brakes
- Clutches
- Clutch/Brake Assemblies
- Wrap Spring
- Micro Clutches
- Custom Engineered Products
- Disc Brakes
- Tension Control Brakes



Heavy Duty Clutches & Brakes

- Pneumatic Clutches & Brakes
- Hydraulic Clutches & Brakes
- Caliper Brakes
- Water Cooled Brakes
- Fluid Couplings
- Custom Engineered Products
- Thruster Drum Brakes
- Disc Brakes



Gear Drives & Gear Motors

- Worm Gear
- Concentric Helical
- Loose Gearing
- High-Speed
- Parallel Shaft
- Torque Limiters
- Precision Gearheads
- Inline Helical
- Helical Bevel
- Shaft Mounted
- Aseptic Drive
- IE4 Geared Motors
- Helical Worm
- Right Angle



Engineered Couplings & Universal Joints

- HP Disc & Diaphragm
- Universal Joints
- Grid & Gear
- Elastomeric
- Precision
- Gear Spindles
- General Purpose
- Locking Devices
- Torque Limiters
- Engine Flywheel



Product Solutions

Our comprehensive product offerings include various types of clutches and brakes, overrunning clutches, engineered bearing assemblies, gearing and gear motors along with linear motion products, belted drives, couplings, limit switches, precision motors, drives & controls, miniature motors and engine braking systems.

With thousands of product solutions available, Altra provides true single source convenience while meeting specific customer requirements. Many major OEMs and end users prefer Altra products as their No. 1 choice for performance and reliability.

www.altramotion.com



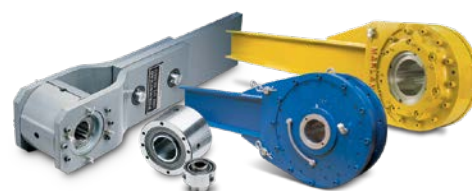
Engine Braking Systems

- Compression Release Brakes
- High Power Density Brakes
- Variable Valve Actuation
- Active Decompression Technology
- Bleeder Brakes
- Exhaust Brakes



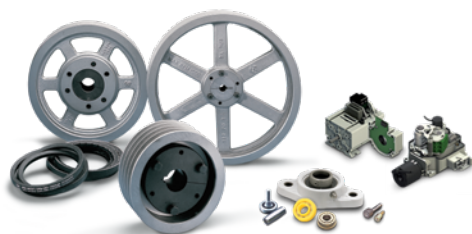
Precision Motors & Automation

- Automation Platforms
- Servo Motors & Drives
- Stepper Motors & Drives
- Direct Drive Motors
- Linear Motors
- Electric Cylinders
- Rodless Actuators
- Precision Gear Motors
- Vehicle Controls



Overrunning Clutches

- General Purpose
- Special Purpose
- Roller & Sprag Backstops
- Clutch Couplings
- Custom Engineered Products



Specialty Components

- Engineered Bearing Assemblies
- Belted Drives & Sheaves
- Mechanical Limit Switches
- Inductors
- Resolvers



Linear Systems

- Linear Actuators
- Precision Shafting
- Ball Screws
- Profile Rail Bearings & Guides
- Lead Screws
- Precision Gearheads
- Linear Motion Systems
- Roundrail Guide Systems



Miniature Motors

- Surgical Power Tool Motors
- Brushless DC Motors
- Brush DC Motors
- Disc Magnet Motors
- Can Stack Motors
- Linear Steppers

Market Expertise

Our teams in the field are more than salespeople...they are experienced application specialists who understand your production process and challenges and can recommend the Altra solution to meet your specific requirements.

With over 1,000 associates in sales and marketing, our extensive industry knowledge encompasses virtually every major market.

Altra Motion



Aerospace & Defense

- Rotary Wing Main Drives & Accessories
- Fixed Wing Aircraft Accessory Drives
- Fixed Wing Aircraft Cargo Systems
- Land-Based Vehicle Drivelines
- Drones



Crane & Hoist

- Overhead Traveling Bridge Cranes
- Gantry Cranes
- Monorail Lifting Systems
- Jib Cranes
- Top Slewing Cranes
- Chain & Wire Rope Hoists



Electronics

- Electronic Wafer Manufacturing
- Component Miniaturization
- Semiconductor Equipment
- IC Fabrication



Food & Beverage

- Conveyors
- Industrial Ovens
- Capping Equipment
- Packaging Machinery
- Mixers



Forklift Truck & AGVs

- Electric Powered Lift Trucks
- Gas Powered Lift Trucks
- Aerial Lifts
- Automated Guided Vehicles



Material Handling

- Bulk Material Handling Conveyors
- Monorails
- Storage Retrieval Systems
- Unit Handling Conveyors
- AGVs



Oil & Gas

- Gas Compressor Pumps
- Offshore Drilling Platforms
- Oil & Gas Wells
- Hydraulic Fracturing



Robotics

- Collaborative Robots
- Industrial Articulated Robots
- Medical Robotics
- Autonomous Mobile Robotics



Renewable Energy

- Wind Turbines
- Tidal Turbines
- Solar Power
- Ethanol Production Equipment



www.altramotion.com



Elevators

- Commercial Elevators
- Industrial Elevators
- Residential Elevators
- Stair Lifts
- Escalators



Factory Automation

- Precision Control & Safety Requirements
- Industry 4.0
- Internet of Things
- Collaborative Robots
- AGV Software



Farm & Agriculture

- Mowers
- Fan Drives
- Grain Handling & Drying Equipment
- Pumps
- Seeders & Sprayers
- Combines, Balers & Harvesters



Medical & Surgical Tools

- Powered Wheelchairs
- Scooters
- Surgical Tools
- X-Ray Tables
- Robotic/Precision Surgery
- Medical Pumps



Metals Market

- Levelers
- Metal Fabrication
- Steel Slitters
- Steel Mill Roll Stands
- Cranes



Mining & Aggregate

- Ball Mills
- Cement Kilns
- Mine Hoists
- Drag Lines
- Mining Shovels
- Conveyors



Transportation

- Class 8 Trucks
- Automotive Seat Bearings
- Off-Road Vehicles
- Light Duty Rail Transmissions



Turf & Garden

- Commercial Lawn Mowers
- Residential Lawn Mowers
- Golf Course Maintenance Equipment
- Utility Vehicles



Water & Wastewater

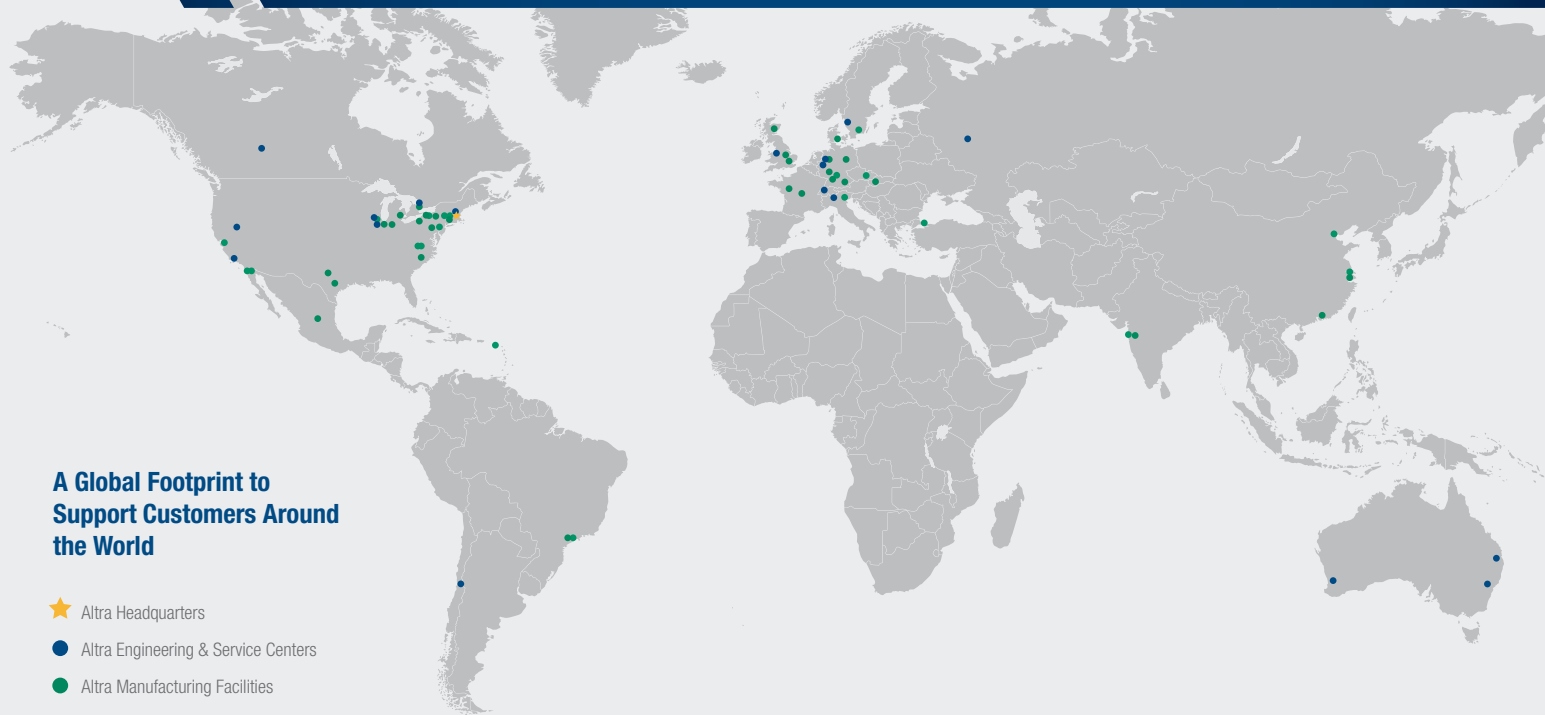
- Cooling Towers
- Pumps
- Water Filtration
- Wastewater Treatment Facilities



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- ★ Altra Headquarters
- Altra Engineering & Service Centers
- Altra Manufacturing Facilities

The Brands of Altra 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

Linear Systems

Thomson
www.thomsonlinear.com

Geared Cam Limit Switches

Stromag
www.stromag.com

Engineered Bearing Assemblies

Kilian
www.kilianbearings.com

Electric Clutches & Brakes

Matrix
www.matrix-international.com

Stromag
www.stromag.com

Warner Electric
www.warnerelectric.com

Belted Drives

TB Wood's
www.tbwoods.com

Heavy Duty Clutches & Brakes

Twiflex
www.twiflex.com

Stromag
www.stromag.com

Svendborg Brakes
www.svendborg-brakes.com

Wichita Clutch
www.wichitaclutch.com

Gearing & Specialty Components

Bauer Gear Motor
www.bauergears.com

Boston Gear
www.bostongear.com

Delevan
www.delevan.com

Delroyd Worm Gear
www.delroyd.com

Nuttall Gear
www.nuttallgear.com

Engine Braking Systems

Jacobs Vehicle Systems
www.jacobsvehiclesystems.com

Precision Motors & Automation

Kollmorgen
www.kollmorgen.com

Miniature Motors

Portescap
www.portescap.com

Overrunning Clutches

Formsprag Clutch
www.formsprag.com

Marland Clutch
www.marland.com

Stieber
www.stieberclutch.com