

# Warner Electric Markets and Products



# **WARNER ELECTRIC IS RECOGNIZED AS A GLOBAL LEADER IN ELECTROMAGNETIC CLUTCH AND BRAKE TECHNOLOGY.**

Warner Electric offers the broadest range of standard, modified and custom-engineered solutions for brake, clutch and linear actuator applications in many industrial markets.

With over 70 years of experience, the Warner Electric brand name provides cost-effective power transmission solutions for applications in diverse industries including elevators, forklift trucks, medical, cranes, medical, printing, transportation and renewable energy.



## **QUALITY**

As market leaders, Warner Electric continuously invests in people, technology and processes. The company has four manufacturing facilities, two located in France and two in the USA. All four plants are registered to ISO 9001:V2000 ensuring that product design and development, manufacturing and service are of the highest standard.

Our refined manufacturing processes and quality supply chain partners enable us to provide cost-effective products that continually meet or exceed customer expectations.

## **TESTING & RESEARCH**

We offer the capability to produce prototype units for testing and evaluation by clients or using our own computer-controlled testing equipment to simulate the operating conditions of a specific application while shortening product development cycles.

## **ENGINEERING AND APPLICATION EXPERTISE**

A dedicated team of market-focused engineers and a technically superior manufacturing staff work together to provide customers with high-quality, application-specific power transmission solutions.

We utilize the “voice of the customer” during design and development which helps to ensure that our products meet the customer’s precise specifications and performance requirements.

## **GLOBAL SALES AND TECHNICAL SUPPORT**

As part of the Altra Industrial Motion family of power transmission companies, Warner Electric provides sales and technical support in over 70 countries around the world including a large dedicated customer service, sales, and distribution operation in North America.

**[www.WarnerElectric.com](http://www.WarnerElectric.com)**

# WARNER ELECTRIC HAS A FULL RANGE OF PRODUCTS THAT MEET THE PERFORMANCE CHALLENGES OF INDUSTRIAL DRIVETRAINS

Whether it's a large clutch for an offshore installation or a high-speed/high cycle, clutch/brake assembly for a paper handling application, Warner Electric has the "Power of Experience" to provide the latest technology at the lowest cost with minimum lead times.

Clutches designed for smooth, soft starts, fast starts, speed changing, reversing and overload protection. Brakes designed for soft, cushioned stops, fast stops, positioned stops, fail safe stops and load holding. Clutch/Brakes designed for rapid cycling, indexing, jogging and soft, smooth starts.

A complete line of Electric Actuators is offered for light-duty, general-duty and rugged-duty applications. All are engineered for maintenance-free, long-life service and can be readily customized to suit specific requirements.

Actuator Controls are also available ranging from simple-to-use switch box controls for basic extend/retract function, to state-of-the-art, microprocessor-based digital electronic controls using SMT design and manufacturing processes.



## Clutch Products

- Clutch Modules
- Shaft Mounted Clutches
- Basic Design Clutches
- Wrap Spring Clutches
- Pneumatic/Hydraulic Clutches
- PTO Clutches
- Vehicular Clutches
- Tooth Clutches



## Brake Products

- Brake Modules
- Shaft Mounted Brakes
- Power-Off Brakes
- Basic Design Brakes
- Trailer Brakes
- Motor Brakes
- Caliper Brakes
- Pneumatic/Hydraulic Brakes
- Tooth Brakes
- Centrifugal Brakes
- X-Small Brakes



## Electric Clutch/Brake Products

- Clutch/Brake Modules
- Shaft Mounted Clutch/Brakes
- Foot Mounted Clutch/Brakes
- Wrap Springs
- PTO Clutch/Brakes
- Basic Clutch/Brake Components



## Clutch/Brake Controls

- On-Off (Basic Start-Stop)
- Adjustable Torque (Soft Start-Stop)
- Positioning Control (Baggage Handling Applications)
- Adjustable Accel-Decel (Soft Start-Stop with Full Torque)
- Overexcitation (Rapid Cycling)
- Tension Controls
- Wrap Spring Controls



## Tension/Torque Control Products

- Permanent Magnet/Hysteresis
- Magnetic Particle
- Electromagnetic Tension
- Torque Limiter
- Capping Clutches
- Tension Controls
- Sensing Devices

# Elevator Market

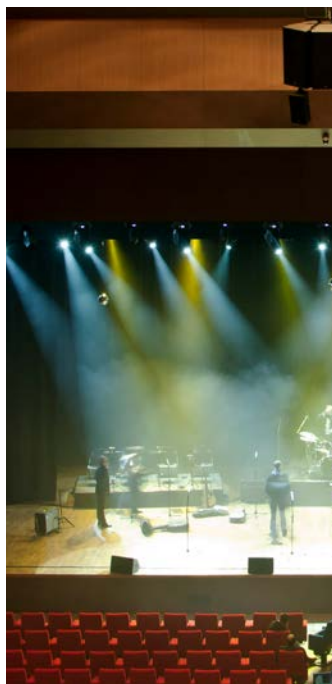
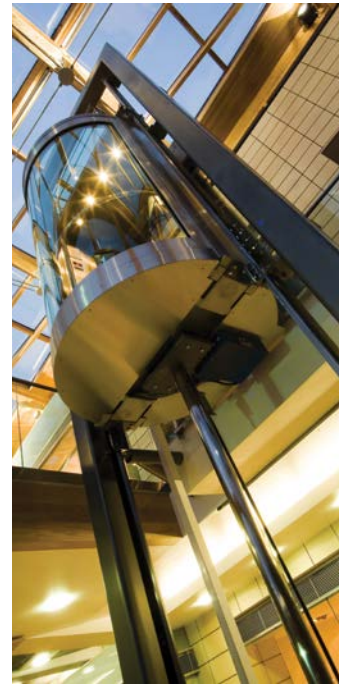
Products to suit all types of elevator applications where quality, reliable, silent, and cost effective braking solutions are required including:

- Lifts for people in buildings
- Lifts for materials
- Elevator and escalators

Warner Electric is serving customers among the most famous worldwide players in the elevator market.

Technology / Products: Single/double friction disc, spring applied and electrically released brakes.

Torque : 50 Nm to 6000 Nm  
Compliance: EN81-20/50



# Stage/Theater

Warner Electric offers reliable braking solutions for use on theater stage lifts that quickly raise and lower large, heavy podiums and scenery sets from beneath sections of the stage floor.

ERS FENIX 09 electrically-released brakes are specifically designed for elevator/lift applications. Failsafe FENIX brakes provide redundant static and emergency stopping functionality in accordance with EN 81 20/50. Two dual-function brakes were installed on each stage section lift drive for added redundancy.

FENIX 09 brakes feature dual magnets and discs, very low noise levels, fast response times, and low dynamic friction/torque tolerances. The modified standard FENIX 09 brake models supplied included high-energy friction linings typically used on heavy-duty industrial crane applications. Manual releases are also available. Torque: 50 Nm to 6000 Nm.



# Forklift Truck & Boomlift

Products to suit all types of electric forklifts and boomlifts including:

- Warehouse trucks
- Counterbalance trucks
- Boomlifts

Application of the brakes are where parking brake, normal braking and also dynamic emergency stop are required.

Technology / Products: spring applied, electrically released brakes but also patented self regulated electro-hydraulic brakes and linear actuators.

Brake torque: 5 Nm to 300 Nm. Linear Actuator load capacity: 240 N to 20000 N.



## Renewable Energy

- Wind turbines (vertical or horizontal axis type)
- Solar panels

Nowadays restrictions of pollution makes green energies grow fast.

Warner Electric can provide specific brake and linear actuator solutions for outdoor, low power consumption and long life requirements.

Technology / Products: Single disc, spring applied, pneumatically or enclosed electrically released brakes, providing up to IP67 class protection.

Torque : 2 Nm to 1000 Nm. Load: 1500 N to 12500 N



# Aerospace & Defense

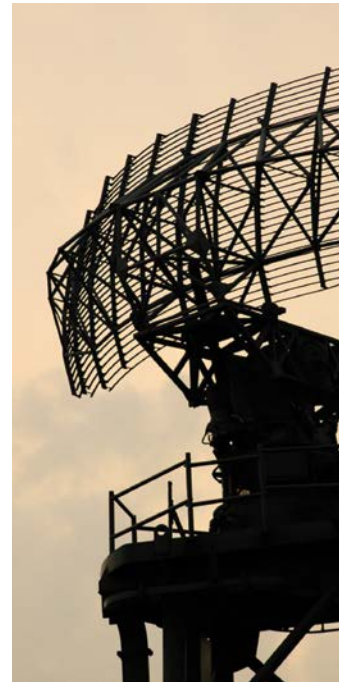
- Aerospace / Defense (Aircrafts, Tanks, Radars)

This niche market is very demanding in terms of quality assurance and product reliability. Warner Electric has been selected as first class supplier by major companies for providing power transmission equipments on military vehicles and aircraft applications.

Miniature brakes are also available for small spaces requirements. The range of X-Small brakes can be used in private plane seating systems.

Technology / Products: Single friction, spring applied, electrically released or pneumatic released clutches

Torque : 10 Nm to 5000 Nm. XSB torque: 1 Ncm to 50 Ncm.



## Motion Control

Warner Electric offers a variety of clutch and brake solutions for a wide range of precision motion control applications. ESC Series clutches are designed specifically for applications that require feeding a sheet of paper or envelope in a specified time period.

XS (X-Small) brakes have been designed with two key constraints in mind: optimize the torque level in the smallest space and at the lightest weight. No compromises have been made between the performance of the brake, the extra low weight and the required space envelope.

WR Series spring-set, electrically released custom brakes provide holding functions as well as occasional dynamic stopping functions in emergency situations. Fractional HP clutches and brakes are designed to start and stop inertial loads when the voltage is turned on.

MB & MC Series permanent magnet clutches and brakes provide constant torque independent of slip speed. They offer excellent overload and jam protection for all drive train components.

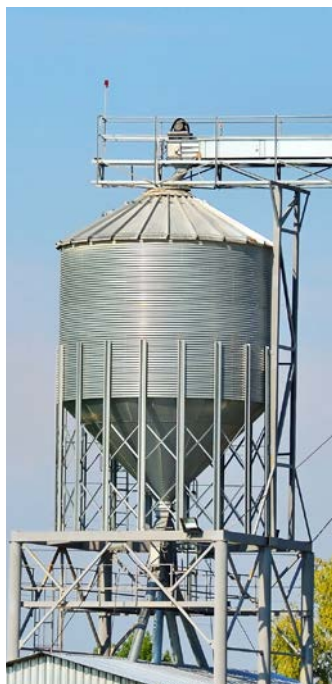
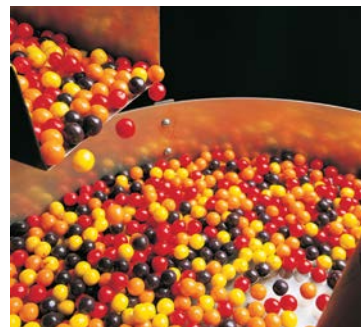
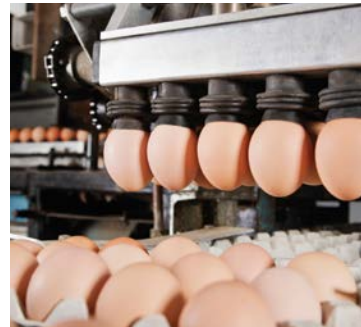


# Food & Beverage

Warner Electric provides precision engineered power transmission components to meet the most demanding washdown requirements for all types of food processing and beverage applications.

Specifically designed for food processing and sanitary applications, totally enclosed Washdown Unimodule and Electro Pack clutch/brakes keep wear particles in and contaminants out. EM, UM and EUM clutch/brake modules provide the ultimate in versatility, from rapid cycling and accurate positioning, to soft controlled starts and stops. A complete line of wrap spring clutches and clutch/brakes are ideal for performing indexing, positioning and backstopping functions.

Warner Electric's unique Smooth Torque Technology enables Warner headsets to provide constant torque. This eliminates over tightened caps, causing a major reduction in variation of removal torque.



# Farm & Agriculture

- Forage harvesters
- Combines
- Tractors

Where strong, reliable, simple and cost effective braking and clutching solutions are required.

Technology / Products: multi-disc, hydraulically actuated, linear actuator or electrically released clutches and brakes.

Torque : 10 Nm to 2000 Nm.

B-track heavy duty load: 120 N to 20000 N



# Medical

- Mobility scooters, medical beds
- X ray and other technology exams machines (MRI, scanners...)

Those applications mainly require static operating (and sometimes noise reduced) brakes to hold the moving systems at standstill.

Technology / Products: tooth clutches and brakes, spring applied single friction WR type brakes.

Torque : 0,1 Nm to 150 Nm. Load : 120 N to 5400 N



# Material Handling

This wide market includes all types of equipments (except forklift trucks) helping people to raise, lift, move or handle any types of loads such as :

- Cranes, hoists, scissor lifts
- Conveyors

Like for elevators, most of our products are safety static brakes to hold a load or prevent it from falling down.

Technology / Products: Single friction, spring applied, electro-modules, electrically released brakes (clutches on driving side of conveyors can also be used).

Torque : 1 Nm to 12800 Nm



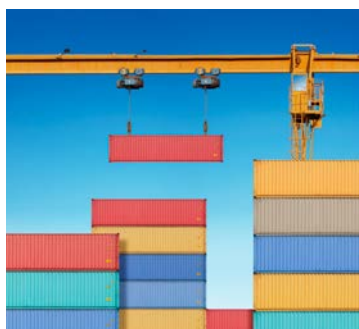
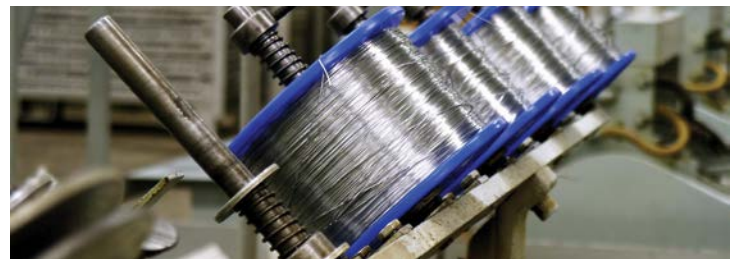
# Tensioning

- Unrolling /rerolling machines (paper, printing, textile industries)
- Unwinding/rewinding machines for wire and cable industries

Where efficient tension regulation, either in open or closed loop, is necessary to keep mechanical characteristics of the material safe.

Technology / Products: low friction systems, hysteresis and powder brakes.

Torque : 0,008 Nm to 500 Nm



# Hoist & Crane

The Warner Electric line of electrically released, dynamic, spring-set (ERD) brakes are installed on hundreds of cranes and hoists around the world. Warner's experience with major crane OEMs over the years has enabled them to develop reliable products for very demanding environments including offshore and nuclear applications.

ERD dry failsafe brakes provide load holding and emergency stopping when the electrical power is either accidentally or intentionally removed.

ERD/ERDD Gen2 models feature a torque range of 400Nm to 1600Nm. ERD/ERDD VAR03 units are available in torque ranges from 1600Nm to 6400Nm. ERD brakes typically provide parking and emergency stop functions on travel drives and holding and emergency stop functions on hoist drives. Units have no residual torque in the disengaged position, a low response time and can be mounted horizontally or vertically.



# Premier Industrial Company Leading Brands

## **Ameridrives**

**Bauer Gear Motor**

**Bibby Turboflex**

**Boston Gear**

**Delevan**

**Delroyd Worm Gear**

**Deltran**

**Formsprag Clutch**

**Guardian Couplings**

**Huco**

**Jacobs Vehicle Systems**

**Kilian**

**Kollmorgen**

**Lamiflex Couplings**

## **Marland Clutch**

**Matrix**

**Nuttall Gear**

**Portescap**

**Stieber**

**Stromag**

**Svendborg Brakes**

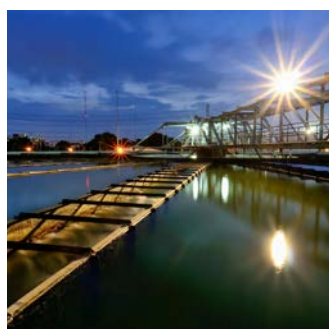
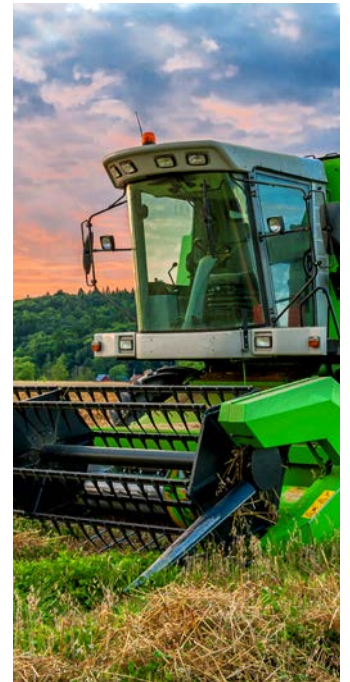
**TB Wood's**

**Thomson**

**Twiflex**

**Warner Electric**

**Wichita Clutch**



## Who We Are

Providing the essential control of equipment speed, torque, positioning, and other functions, Altra products are used in nearly any machine or process involving motion.

Altra products are marketed under a variety of well recognized and established manufacturing brand names. Each of these businesses is committed to the guiding principles of operational excellence, continuous improvement and customer satisfaction.

Our products are frequently used in a wide range of high-volume manufacturing processes, where the reliability and accuracy are critical in both avoiding costly down time and enhancing the overall efficiency of manufacturing operations.

# Premier Industrial Company Leading Brands

## OTHER PRODUCT SOLUTIONS FROM **ALTRA MOTION**

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**



### **Electric Clutches & Brakes**

Inertia Dynamics  
Matrix  
Stromag  
Warner Electric



### **Precision Motors & Automation**

Kollmorgen



### **Heavy Duty Clutches & Brakes**

Industrial Clutch  
Stromag  
Svendborg Brakes  
Twiflex  
Wichita Clutch



### **Miniature Motors**

Portescap



### **Overrunning Clutches**

Formsprag Clutch  
Marland Clutch  
Stieber



### **Linear Systems**

Thomson



### **Engineered Couplings & Universal Joints**

Ameridrives  
Bibby Turboflex  
Guardian Couplings  
Huco  
Lamiflex Couplings  
Stromag  
TB Wood's



### **Engine Braking Systems**

Jacobs Vehicle Systems



### **Gear Drives & Gear Motors**

Bauer Gear Motor  
Boston Gear  
Delroyd Worm Gear  
Nuttall Gear



### **Specialty Components**

Kilian  
Stromag  
TB Wood's

# Warner Electric Markets and Products

## ETATS-UNIS

### New Harford, CT

31 Industrial Park Road  
New Hartford, CT 06057 - USA  
815-389-3771  
Fax: 815-389-2582

**Application Support:**  
1-800-825-9050

### South Beloit, IL

449 Gardner Street  
South Beloit, IL 61080 - USA  
815-389-3771  
Fax: 815-389-2582

**Application Support:**  
1-800-825-9050

### Columbia City, IN

4578 East Park 30 Drive  
Columbia City, IN 46725  
815-389-3771  
Fax: 815-389-2582

**Application Support:**  
1-800-825-9050

## EUROPE

### France

7, rue Champfleury, B.P. 20095  
St Barthelemy d'Anjou - France  
+33 (0)2 41 21 24 24  
Fax: +33 (0)2 41 21 24 70

**Application Support:**  
+33 (0) 2 41 21 24 24

## ASIA PACIFIC

### Australia

1/11 Penny Place  
Arndell Park, NSW 2148  
Sydney, Australia  
+61 (0) 2 9622 1333  
Fax: +61 (0) 2 8814 9409

[www.warnerelectric.com.au](http://www.warnerelectric.com.au)

### China - Hong Kong

Room 304B,3/L,  
Join-In Hang Sing Centre  
71-75 Container Port Road Kwai  
Chung, NT, Hong Kong  
Tel : 852 2615 9313  
Fax: 852 2615 9162

[www.warnerelectric.com.hk](http://www.warnerelectric.com.hk)

### China - Shanghai

Suite 301, Lihpao Plaza #5  
88 Shen Bin Road, Minhang District,  
Shanghai 201106 – China  
Tel 86 21 5169 9255  
Fax: 86 21 6248 5387

[www.altramotion.com.cn](http://www.altramotion.com.cn)

### Taiwan

3rd Fl., No. 35, Lane 32  
Kwang-Fu, South Road  
10562 Taipei  
Tel: +886 2 2577 8156  
Fax: +886 2 2570 6358

[www.warnerelectric.com.tw](http://www.warnerelectric.com.tw)

### Singapore

39 Benoi Road  
Singapore 627725  
Tel: +65 6487 4464  
Fax: +65 6487 6674

[www.warnerelectric.com.sg](http://www.warnerelectric.com.sg)

### Thailand

178 Soi Anamai Srinakarin Rd.  
Suanluang Bangkok 10250  
Tel: +66 2 322 5527  
Fax: +66 2 320 2380

[www.warnerelectric.com.tw](http://www.warnerelectric.com.tw)

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