Power Transmission Solutions for the Mining Industry

Wichita Clutch
Industrial Clutch
Twiflex Limited
Matrix International
Marland Clutch
Formsprag Clutch
Stieber Clutch
Detroyd Worm Gear
Nuttall Gear
Ameridrives Couplings
Bibby Turboflex
Boston Gear
TB Wood’s
Bauer Gear Motor
Svendborg Brakes
Guardian Couplings

Altra Industrial Motion
The Power of Experience
ALTRA INDUSTRIAL MOTION PROVIDES POWER TRANSMISSION SOLUTIONS FOR UNDERGROUND MINING, SURFACE MINING, AND PROCESSING APPLICATIONS

From heavy-duty brakes for draglines and electric rope shovels to caliper brakes and disc couplings on winders and ventilation fans, a wide array of Altra products keeps mining operations running smoothly worldwide.

The companies of Altra Industrial Motion are industry leaders in braking, engaging, overrunning, gearing, and load transmitting products. Whether a power transmission coupling is required or a highly engineered torque limiting device is needed, Altra Industrial Motion has the expertise and the knowledge to design, manufacture, and market reliable products with the lowest cost of ownership.

ALTRA INDUSTRIAL MOTION
AVAILABLE WHERE YOU NEED US, WHEN YOU NEED US

Whether you need complete units or genuine replacement parts, choose the brands known in mines around the world.

Mining products from Altra Industrial Motion can be found throughout the world with locations in China and Asia Pacific, Australia, Europe, South America, South Africa, and North America. Our sales associates and application engineers are well trained to understand your product needs and recommend the right power transmission solution for your specific application.

Trained and authorized distributor partners are also strategically located around the globe in major cities, ports, and mining regions to help meet your needs.

For detailed information about application-specific power transmission solutions from Altra Industrial Motion including case studies, literature, and service manuals, visit

www.AltraMining.com
ALTRA PRODUCTS KEEP MINES RUNNING SMOOTHLY... WORLDWIDE

Clutches and Brakes
As the largest provider of clutches and brakes for draglines and shovels, Altra offers expertise in acceleration and deceleration of heavy-duty drive systems. Altra is an industry leader in braking and engaging products for many mining applications including grinding mills, conveyors, mine hoists, coal pulverizers, stackers/reclaimers, longwall miners, shuttle cars, haulers, and railed vehicles.

*Bibby Turboflex • Guardian Couplings

Belted Drives and Couplings
An extensive offering of V-belt and synchronous drives (up to 108” / 2.75m in diameter) has been heavily utilized in underground and processing applications for years – including crushers, conveyors, cooling towers, pumps, flotation cells, fans, and compressors. Pioneering many technological innovations to keep in step with changing mining requirements, Altra’s engineered couplings (grid, gear, flywheel, and universal joints) have become the preferred solution in a variety of demanding mining operations such as draglines, shovels, stackers/reclaimers, crushers, grinding mills, processing equipment, shuttle cars, and conveyors.

*TB Wood’s • Ameridrives Couplings • Bibby Turboflex • Guardian Couplings

Overrunning Clutches
Offering the broadest range of both sprag and ramp-and-roller overrunning clutches and backstops, Altra brands are the world’s leading authorities for applications requiring overrunning clutches and backstops, such as conveyors, pumps, fans, and redundant drive systems. Available for both high-speed and low-speed operations. Bore sizes, up to 23.5” (600mm) and torque ranges up to 1.2M lb.ft. (1.6Nm).

*Formsprag Clutch • Marland Clutch • Stieber Clutch

Enclosed Gearing and Geared Motors
As the leading innovator of worm and helical gearing and gear motor technology, Altra continues to improve product performance by developing innovative features, designs, and custom-engineered solutions to meet unique market requirements. Providing unmatched reliability and versatility, these products have been used by the mining industry for years and can be found in draglines, shovels, continuous miners, stackers/reclaimers, crushers and sizers, sedimentation tanks and flotation cells, underground vehicles, fans and mine cooling systems, and conveyors. Worm gears up to 48” center distance and helical gearing up to 6M in.lbs. (675kNm) continuous. Energy efficient geared motors are available in a wide range of styles and sizes.

*Boston Gear • Nuttall Gear • Delroyd Worm Gear • Bauer Gear Motor

Overload Clutches and Torque Limiters
Altra provides positive engagement overload clutches, centrifugal soft-start clutches, and modular torque limiters with up to 95% torque setting accuracy. These products are often utilized in longwall and continuous miners, ventilation fans and compressors, crushers, grinding mills, coal pulverizers, sedimentation tanks, and conveyors.

*Bibby Turboflex • Boston Gear
Rotary Blast Hole Drills

Heavy-duty brakes by Industrial Clutch are used to lock the spindle in the case of an emergency stop, providing reliable and repeatable performance. Ameridrives and Bibby gear couplings are used for low-speed, high-torque hoist, lift, and drill movements.

TB Wood’s and Guardian elastomeric couplings are used to connect the hydraulic pump to the main drive. These couplings provide great vibration dampening and excellent misalignment capabilities.

Industrial Clutch LKB Spring Set, Air Released Brakes
Ameridrives Couplings Gear Couplings
TB Wood’s Dura-Flex® Elastomeric Couplings
Guardian Couplings Shaft-to-Shaft and Flywheel Couplings

Electric Rope Shovels and Draglines

Industrial Clutch heavy-duty brakes and Twiflex caliper brakes are used for controlled engagement and emergency stopping on rope hoists and bucket drag winches. Industrial brakes are also used to “park” the tracks and for controlled engagement for swing, propel, and crowd motion applications.

Ameridrives and Bibby gear couplings are used to connect motors to large Nuttall helical speed reducers on hoist and drag drivetrains. Those same couplings are also found on swing, propel, and crowd motion drives.

Boston Gear helical gear drives are found on rope threaders. Formsprag overrunning clutches and backstops are used to prevent reverse rotation of cooling fans. TB Wood’s and Bibby grid couplings along with Guardian flywheel couplings are used on hydraulic power units in auxiliary systems.

Industrial Clutch LKB Spring Set, Air Released Brakes
Twiflex Limited GMR-SD Spring Applied, Air Released Caliper Brakes
Guardian Couplings Flywheel Couplings
Boston Gear Series 2000 Inline Helical Gear Drives
Formsprag Clutch FSO Overrunning Clutches and LCB200 Backstops
Ameridrives Couplings Grid Couplings, Gear Couplings and Amerigear Spindles
Nuttall Gear Speed Reducers
Mine Haul Trucks
Large, rigid-frame haul trucks utilize Matrix multi-plate brakes mounted within the rear wheels. These spring-applied, hydraulically-released brakes are sealed and oil-cooled. The axles are connected to the transmission using power-dense U-joints.

Matrix International SAE Hydraulically-Actuated, “Bolt-On” Brakes
Ameridrives Couplings U-joints
Surface Mining Operations

Crushers

High-capacity TB Wood’s V-Belt sheaves are used to increase torque between the motor and the crusher. They are used when a redundant system is present or when the primary mover is a tandem drive. On a direct drive system, or a combination of belted and direct drive systems, high-torque gear couplings are used.

To prevent reverse rotation, Formsprag overrunning clutches are used on the rotor portion of cone or gyratory crushers. Bibby and Boston torque limiters are often found on the “anti-spin” of bowl type crushers to maintain product uniformity.

Wichita PTOs and clutches, along with Nuttall speed reducers and Guardian couplings are also utilized on crusher drivetrains.

- **Ameridrives Couplings** Grid Couplings and Gear Couplings
- **Wichita Clutch** PTOs and EM Series Clutches
- **Bibby Turboflex** Bibbigard® Torque Limiters & Rotofluid Couplings
- **Boston Gear** Centric® Series CCC Overload Clutches
- **Nuttall Gear** Moduline Concentric Speed Reducers
- **Bauer Gear Motors** BF Series Parallel Shaft Gear Motors and BK Series Helical Bevel Gear Motors
- **Formsprag Clutch** Overrunning Clutches
- **Guardian Couplings** Shaft-to-Shaft and Flywheel Couplings
- **TB Wood’s** V-Belt Sheaves

Inclined, Declined, and Overland Conveyors

Inclined and overland conveyors use backstops to protect against roll back under load. Formsprag, Marland, and Stieber high-speed backstopping clutches are utilized on the conveyor’s enclosed gear drive. Low-speed, high-torque holdbacks are mounted close to the drive pulley/head shaft.

Twiflex and Svendborg spring-applied caliper braking systems are used to limit drift time or to prevent belt run-away in the event of a power failure on overland and declined conveyors. Svendborg’s SOBO® iQ soft braking control technology reduces wear on equipment and provides consistent stopping times or distances.

Nuttall helical and Delroyd worm gearing solutions are typically used on main drives and, in the case of an inclined conveyor, a high-speed backstop may be added. TB Wood’s and Bibby grid couplings along with Guardian curved jaw couplings connect the drive motor to the speed reducer input shaft. Bibby and Ameridrives gear couplings with rigid special overhung moment are used for connecting the head pulley to the motor gearbox drive package. Bibby torque limiters are used to prevent catastrophic failure associated with a sudden spike in torque.

- **Wichita Clutch** AirMaKKs & LI-SSB Clutches
- **Bibby Turboflex** Bibbigard® Torque Limiters & Rotofluid Couplings
- **Altra Couplings** Grid Couplings and Gear Couplings
- **Formsprag Clutch** Backstops, Holdbacks & Overrunning Clutches
- **Marland Clutch** Backstops & CECON Clutches
- **Svendborg Brakes** Caliper Disc Brakes, SOBO® iQ Braking Controls & Hydraulic Power Units
- **Bauer Gear Motors** BF Series Parallel Shaft Gear Motors and BK Series Helical Bevel Gear Motors
- **Nuttall Gear** Moduline Concentric and Type TDS Parallel Shaft Speed Reducers
- **Stieber Clutch** Releasable Backstops
- **Guardian Couplings** Shaft-to-Shaft and Flywheel Couplings
- **Delroyd Worm Gear** Gearing
- **TB Wood’s** V-Belt Drives
- **Boston Gear** 700 Series Worm Gear Drives
- **Twiflex Limited** Spring Applied, Hydraulic or Air Released Caliper Brakes
Ball and SAG Mills

Wichita SV Ball Mill Clutches are specifically designed for mill applications and are the product of choice on geared mills. The high-heat dissipation clutches enable smooth starts and a means to disconnect the prime mover from the main drive.

High-capacity Ameridrives and Bibby gear couplings, along with TB Wood’s and Bibby grid couplings, are used on geared mills to connect the motor to the speed reducer and the gear drive to the pinion gear. Boston Gear centrifugal clutches are used to help soft-start heavy inertia loads. Bibby torque-limiting modules are tamper-proof and are designed to be integrated into many types of mill systems. Guardian Quik Joint pipe couplers are used on environmental/dust control systems.

Twiflex and Svendborg caliper disc brakes are typically grouped together to multiply braking force for reliable emergency stopping on gearless mills. Models found on geared mills are used to stop and hold the inertia.

- **Ameridrives Couplings** Grid Couplings and Gear Couplings
- **Bibby Turboflex** Bibbigard® Torque Limiters
- **Boston Gear** Centric® Series CCC Overload Clutches
- **Twiflex Limited** Spring-Applied Modular Caliper Brakes
- **Wichita Clutch** Grinding Mill Clutch
- **Guardian Couplings** Shaft-to-Shaft Couplings & Quik Joint Pipe Couplers
- **Svendborg Brakes** Caliper Disc Brakes and Hydraulic Power Units
Utility Vehicles, Shuttle Cars, and Locomotives

Matrix hydraulic brakes and Ameridrives gear spindles provide reliable performance on all types of mining vehicles including loaders, haulers, shuttle cars, and personnel carriers. Ameridrives Power Transmission U-joint shafts are often mounted between the traction motors and the wheel assemblies.

Twiflex spring-applied, air-released caliper brakes are used for holding on shuttle locomotives. These brakes are installed on the wheel axle and gearbox input shaft. Matrix customized, spring-applied, oil-cooled wheel brakes with service, E-stop and parking functions are also used on locomotives. Spring-applied, electromagnetically-released parking brakes are found on smaller, battery-powered locomotives.

Engine-mounted Guardian couplings connect to gearboxes or hydraulic pumps. Matrix spring-applied, hydraulically-released integrated brakes are mounted on the main gear box between the wheels and the motor on shuttle cars.

Ameridrives Couplings Gear Spindles, Gear Couplings and U-Joints
Matrix International SAE Hydraulically-Actuated “Bolt-On” Brakes and Custom Design Integrated Wheel Brakes
Twiflex Limited GMRSD Spring Applied, Air Released Brakes, MX Series Hydraulically Released Brakes and MXEA Electric Brakes
Guardian Couplings Shaft-to-Shaft and Flywheel Couplings
Longwall and Continuous Miners

Bibby tamper-proof, positive engagement torque-limiting modules and Boston Gear centrifugal friction clutches provide protection against sudden torque spikes and high inertia starting loads. These components are used on shearers and hauling drives to prevent premature wear and catastrophic failures.

Matrix spring-applied, hydraulically-released brakes are used to “park” the shearer at any given position. TB Wood’s and Guardian couplings are utilized on hydraulic pump drives. Nuttall speed reducers are used on the drive of the armor-faced conveyor, the shearer’s haulage system and “scooping” arms.

Bibby Turboflex Bibbigard® Torque Limiters
Guardian Couplings Shaft-to-Shaft, Flywheel and Curved Jaw Brake Disc Couplings
Matrix International Series 56P Multi-Disc Brakes
Nuttall Gear Type TDS Parallel Shaft (incline) Speed Reducers
Boston Gear Centric® Torque Limiters and Series CCC Overload Clutches
TB Wood’s Dura-Flex® and Sure-Flex® Plus Elastomeric Couplings

Sizers and Feeder Breakers

TB Wood’s and Bibby grid couplings, positioned between the motor and speed reducer, are designed to provide protection against damaging effects of shock loads and vibration on sizers and feeder breakers.

Rugged Nuttall enclosed gearing solutions are used to drive the crushing roller and to power the feeding conveyor. Ameridrives and Bibby gear couplings transmit very high torque from the output shaft of the reducer to the main and conveyor drives.

Wichita and Bibby fluid couplings are a good choice when soft starting, along with shock load protection capabilities, is needed. Boston Gear centrifugal clutches provide similar protection on breakers. Ameridrives Power Transmission U-joints are sometimes used when high misalignment is present. TB Wood’s elastomeric couplings and belted drives are routinely utilized on this equipment.

Ameridrives Couplings Grid Couplings, Gear Couplings and U-Joints
Bibby Turboflex Rotofluid Couplings
Boston Gear Centric® Centrifugal Clutches
TB Wood’s Dura-Flex® and Sure-Flex® Plus Elastomeric Couplings; V-Belt & Synchronous Drives
Nuttall Gear Moduline Concentric Speed Reducers
Wichita Clutch Mesur-Fil® Fluid Couplings
Winders, Hoists, and Elevators

Twiflex and Svendborg mounted caliper brakes are grouped together to multiply braking force for reliable positioning (low speed to bring to rest), holding/parking, and emergency stopping. Svendborg’s SOBO® iQ control technology provides soft and predictable braking sequences on deep underground mine winders and hoists.

Grid, shaft-to-shaft and high-torque capacity gear couplings from Ameridrives, Bibby, Guardian and TB Wood’s transmit torque between the drive motor and the speed reducer, and between the speed reducer and the hoist drum.

Altra Couplings Grid Couplings and Gear Couplings
Twiflex Limited Spring Applied Hydraulic Caliper Brakes
Guardian Couplings Shaft-to-Shaft Elastomeric Couplings
Svendborg Brakes Caliper Disc Brakes, SOBO® iQ Braking Controls and Hydraulic Power Units
Bauer Gear Motors BF Series Parallel Shaft Gear Motors and BK Series Helical Bevel Gear Motors

Fans & HVAC Systems

TB Wood’s belted drives are used on fans when the motor shaft is parallel and offset to the fan shaft, or when it is powered by two prime movers. When the fan design requires the motor to be mounted in-line with the fan shaft, high-performance Ameridrives, Bibby, Guardian, and TB Wood’s couplings are used. Nuttall speed reducers are sometimes attached to the main drives.

Wind-milling of the fan is prevented by using a Formsprag backstop. Formsprag overrunning clutches are used when a redundant drive system is present. To avoid premature drive system wear, Boston Gear centrifugal friction clutches are installed to assist on start up. Spring-applied caliper braking systems from Twiflex and Svendborg provide reliable stopping and holding performance.

Boston Gear Centric® Series CCC Overload Clutches
Formsprag Clutch FSO & HSB Overrunning Clutches and LCB200 Backstops
Ameridrives Couplings Turboflex GC Couplings
Twiflex Limited Spring Applied, Air Released Caliper Brakes
Bibby Turboflex Turboflex HP Couplings
TB Wood’s Form-Flex® Couplings, Floating Shaft Couplings & V-Belt Drives
Guardian Couplings Curved Jaw Brake Disc Couplings
Nuttall Gear Speed Reducers
Svendborg Brakes Caliper Disc Brakes and Hydraulic Power Units
Railcar Positioners & Dumpers (Wagon Tipplers)

Ameridrives and Bibby gear couplings transmit torque from the rotating dumper barrel’s primary mover to the helical gear drive and from the gear drive to the load on wagon tipplers. Twiflex and Svendborg caliper brakes provide superior positioning, holding, and emergency stopping performance on the car dumper rotation drive.

Bibby torque limiters are utilized on railcar positioners that move and feed strings of cars in and out of the wagon tippler without the need for a locomotive.

**Ameridrives Couplings** Grid Couplings and Gear Couplings
**Twiflex Limited** Models VKSD & VM3-SPS Caliper Brakes
**Svendborg Brakes** Caliper Disc Brakes and Hydraulic Power Units
**Bibby Turboflex** Torque Limiters

Stacker/Reclaimers

The bucket wheel is driven by an electric motor connected to a helical gear reducer via a high-speed coupling. The boom is raised and lowered by a hoist that utilizes Twiflex and Svendborg caliper brakes for holding and emergency stopping. The machine moves forward and backward via a set of tracks controlled by electric motors, speed reducers, caliper brakes, and Ameridrives gear spindles.

Industrial Clutch brakes, positioned on the drive end opposite of the motor, are used for controlled engagement and high-energy stops. Ameridrives, Bibby, Guardian, and TB Wood’s couplings are used to connect the motor to the speed reducer on take-away and discharge conveyors, tracks, and bucket wheel rotation drives. Boston Gear enclosed helical gearing is found on rope threader drivetrains.

These massive machines require large cooling fan systems that often utilize Formsprag high-speed backstops to prevent reverse rotation.

**Twiflex Limited** Spring Applied, Air Released Caliper Brakes
**Formsprag Clutch** Overrunning Clutches
**Ameridrives Couplings** Gear Spindles, Grid Couplings and Gear Couplings
**Svendborg Brakes** Caliper Disc Brakes and Hydraulic Power Units
**Guardian Couplings** Curved Jaw Brake Disc and Shaft-to-Shaft Couplings
**Industrial Clutch** LKB Spring Set, Air Released Brakes
**Boston Gear** Series 2000 Inline Helical Gear Drives
**Bibby Turboflex** Rotofluid Couplings
Pumps and Compressors
Pump packages utilize high horsepower TB Wood’s V-belt drives to connect the motor to the pump shaft. The belted drive can also be designed with an optimal speed reduction ratio to increase torque to the pump.

For direct drive pump systems, a variety of TB Wood’s, Bibby, Guardian, and Ameridrives couplings or Ameridrives U-joints transmit power from the motor to the pump shaft. When pumps are connected to a common manifold, Formsprag overrunning clutches can be used on each pump to protect it and the other power transmission components from counter-rotation of the impeller and reverse fluid flow.

Bibby torque limiters, Marland clutches, and Nuttall speed reducers are often incorporated on larger pump drivetrains.

Guardian Couplings Flywheel and Shaft-to-Shaft Elastomeric Couplings
Bibby Turboflex Turboflex HP Couplings and Bibbigard® Torque Limiters
TB Wood’s Dura-Flex®, Sure-Flex® Plus, Form-Flex® and Floating Shaft Couplings; V-Belt Drives
Ameridrives Couplings Turboflex GC Couplings, Grid Couplings and U-Joints
Nuttall Gear Moduline Concentric Speed Reducers
Bauer Gear Motors BG Series Helical Gear Motors
Formsprag Clutch Overrunning Clutches
Marland Clutch CECON Clutches
**Sedimentation Tanks**

Boston Gear enclosed speed reducers along with a variety of TB Wood’s, Bibby, and Guardian couplings are often utilized in the common powertrains that drive both the bottom scrapers/agitators and upper skimmers in circular tanks. In many cases, the chain drive is located above the center of the tank. However, some round clarifier designs position the drive units on outer perimeter tank rim tracks.

Boston Gear and Bibby overload clutches and torque limiters are frequently installed to prevent the massive amount of torque generated from damaging the drive mechanism, due to the slow rotation speed of the skimmers/scrapers and potential jams.

**Ameridrives Couplings** Grid Couplings  
**Bibby Turboflex** Torque Limiters  
**Boston Gear** Centric® Torque Limiters, Series CCC Overload Clutches and Series 2000 Inline Helical Gear Drives  
**Bauer Gear Motors** BK Series Helical Bevel Gear Motors  
**TB Wood’s** Dura-Flex® and Sure-Flex® Plus Elastomeric Couplings  
**Guardian Couplings** Shaft-to-Shaft Elastomeric Couplings

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**Flotation Cells**

TB Wood’s large diameter and high HP belted drives connect the main drive motor to the agitator shaft. In the case of larger capacity flotation cells, TB Wood’s, Bibby and Guardian couplings can be used on the agitator drivetrain. Bibby mechanical torque limiters are often utilized to protect the main drivetrain from damage due to sudden overload caused by jams.

**Bibby Turboflex** Torque Limiters  
**Ameridrives Couplings** Grid Couplings  
**Guardian Couplings** Shaft-to-Shaft Elastomeric Couplings  
**TB Wood’s** Dura-Flex® and Sure-Flex® Plus Elastomeric Couplings; V-Belt Drives and MTO Sheaves

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**Belt Filter Press**

TB Wood’s synchronous belted drives are used to power the filtering medium pressure rolls via a Boston Gear enclosed gear drive.

**Boston Gear** Series 2000 Inline Helical Gear Drives  
**TB Wood’s** Synchronous Belted Drives
CHECK OUT
www.AltraMining.com

The website offers the worldwide mining and aggregate marketplace convenient, 24-hour access to the Altra brands, products and applications critical to virtually every operation in the mining process.

The website is organized by 15 mining application categories ranging from shovels and draglines to conveyors, crushers, winders and hoists, and more.

Within these categories are the features and benefits of each Altra product solution that can be applied to improve efficiency, productivity, and safety in the mining operation. Each product contains a web link to one of the 16 Altra brands that support the mining industry, where engineers can access detailed product specifications.

The website also contains a Mining Solutions Video, Case Studies, a Literature Portal and information on Altra’s Replacement Program for clutches and brakes – from Industrial Clutch, Wichita Clutch and Twiflex as well as its Rebuild Program for backstops from Formsprag Clutch and Marland Clutch.
## ALTRA MARKET WEBSITES

See how the brands of Altra Industrial Motion are dedicated to providing better ways to solve power transmission applications.

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Altra Industrial Motion

Belted Drives and Sheaves

TB Wood’s
Belted Drives
Chambersburg, PA - USA
1-888-829-6637 – Press #5
For application assistance: 1-888-829-6637 – Press #7

Couplings

Ameridrives Couplings
Mill Spindles, Ameriflex, Ameridisc
Erie, PA - USA
1-814-480-5000
Gear Couplings
San Marcos, TX - USA
1-800-449-9087

Ameridrives Power Transmission
Universal Joints, Drive Shafts, Mill Gear Couplings
Green Bay, WI - USA
1-920-583-2444

Bibby Turboflex
Disc, Gear, Grid Couplings, Overload Couplings
Sheffield, England
+44 (0) 1924 460801
Boksburg, South Africa
+27(0) 11 918 4270

Guardian Couplings
Engineered Flywheel Couplings, Engine Housings and Pump Mounts, Flexible Shaft Couplings
Michigan City, IN - USA
1-219-874-5248

Huco Dynatork
Precision Couplings and Air Motors
Hertford, England
+44 (0) 1922 501900
Chambersburg, PA - USA
1-888-829-6637

Coupings Cont.

Lamiflex Couplings
Flexible Couplings; Bearing Isolators, and Coupling Guards
Cotia, SP - Brasil
+55 (11) 4615-6300

TB Wood’s
Elastomeric Couplings
Chambersburg, PA - USA
1-888-829-6637 - Press #5
For application assistance: 1-888-829-6637 – Press #7
General Purpose Disc Couplings
San Marcos, TX - USA
1-888-449-9439

Electromagnetic Clutches and Brakes

Inertia Dynamics
Spring Set Brakes; Power On and Wrap Spring Clutch/Brakes
New Hartford, CT - USA
1-800-800-6445

Matrix International
Electromagnetic Clutches and Brakes, Pressure Operated Clutches and Brakes
Brechin, Scotland
+44 (0) 1356 602000
New Hartford, CT - USA
1-800-825-6544

Warner Electric
Electromagnetic Clutches and Brakes
New Hartford, CT - USA
1-800-825-6544
For application assistance: 1-800-825-6544

Engineered Bearing Assemblies

Kilian Manufacturing
Engineered Bearing Assemblies
Syracuse, NY - USA
1-315-432-0700

Gearing

Bauer Gear Motor
Geared Motors
Esslingen, Germany
+49 (711) 3518-0
Somersett, NJ - USA
1-732-469-8770

Boston Gear
Enclosed and Open Gearing, Electrical and Mechanical P.T. Components
Charlotte, NC - USA
1-800-825-6544
For application assistance: 1-800-816-5008

Nuttall Gear and Delroyd Worm Gear
Worm Gear and Helical Speed Reducers
Niagara Falls, NY - USA
1-716-298-4100

Heavy Duty Clutches and Brakes

Industrial Clutch
Pneumatic and Oil Immersed Clutches and Brakes
Waukesha, WI - USA
1-262-547-3357

Svendborg Brakes
Industrial Brakes and Brake Systems
Vejstrup, Denmark
+45 63 255 255

Twiflex Limited
Caliper Brakes and Thrusters
Wichita Falls, TX - USA
1-944-723-3483
Twickenham, England
+44 (0) 20 8894 1161

Heavy Duty Clutches and Brakes Cont.

Wichita Clutch
Pneumatic Clutches and Brakes
Wichita Falls, TX - USA
1-800-964-3262
Bedford, England
+44 (0) 1234 350311

Linear Products

Warner Linear
Linear Actuators
Bolivides, IL - USA
1-800-825-6544
For application assistance: 1-800-825-6544
Saint Barthélémy d’Anjou, France
+33 (0) 41 21 24 24

Overrunning Clutches

Formsprag Clutch
Overrunning Clutches and Holdbacks
Waverly, MI - USA
1-800-348-0881 – Press #1
For application assistance: 1-800-348-0881 – Press #2

Marland Clutch
Roller Ramp and Sprag Type Overrunning Clutches and Backstops
South Beloit, IL - USA
1-800-216-3515

Stieber Clutch
Overrunning Clutches and Holdbacks
Heidelberg, Germany
+49 (0) 6221-30470

For information concerning our sales offices in Asia Pacific check our website
www.altramotion.com.cn