Cold Forming
Delroyd Worm Gear pinch roll drives stand up to severe shock loads and potential damage in mill environments. The drives feature fabricated steel housings with up to 48" center distances which allow for higher horsepower ratings compared to cast iron housings. Durable Ameridrives Power Transmission universal joints provide a high degree of strength with minimum distortion under load. Units feature one-piece yoke and bearing housing construction.

Bauer BF Series gear motors feature grey cast iron gearbox and motor housings, a reinforced fan, high temperature seals, and a heavy duty fan cover. TB Wood's Dura-Flex elastomeric couplings are often utilized in cold forming applications. The couplings are easy to assemble and provide superior fatigue resistance in tough steel mill environments.

Transfer Tables/Conveyors
TB Wood’s QT Power chain® II belt drive system features a synchronous belt, sprockets, bushings and idlers all designed to work together for maximum value in high torque drive applications including mill transfer tables. Bauer geared motors and Bibby torque limiters are also utilized on chain driven conveyor systems throughout the mill.

TB Wood's Dura-Flex® Couplings and QT Power Chain® II belt drive system
Bauer Gear Motor BF Series shaft-mounted geared motors and BG Series helical in-line gear motors
Twiflex Limited MX pneumatic caliper disc brakes
Bibby Turboflex Bibbigard torque limiters
Wichita Clutch AquaMaKKs™ clutches and brakes

Ameridrives Power Transmission Americardan 3000 Series universal joints
TB Wood's Dura-Flex® couplings
Ameridrives Amerigear® couplings (AGMA) and SL & SF Series mill spindles
Bauer Gear Motor BF Series shaft-mounted geared motors
Nutall Gear TDS/HFD parallel shaft and Modulin® concentric shaft speed reducers
Delroyd Worm Gear Pinch roll drives
Formsprag Overrunning clutches
Bibby Turboflex Series III couplings and modular torque limiters
Ameridrives Ameriloc® shaft locking devices
As industry leaders in electromechanical power transmission products, the companies of Altra Industrial Motion have been helping metal processing equipment manufacturers and mills worldwide achieve great success by increasing their efficiency while at the same time reducing their costs and downtime. Altra engineered power transmission products are installed in a wide array of mill applications including annealing, pickling and coating lines, levelers, temper mills, slitters, accumulators, cold forming mills, chain conveyors, coilers and uncoilers.

Altra companies provide a comprehensive offering of mill spindles, couplings, U-joints, gear motors, speed reducers, torque-limiting devices, caliper brakes and backstopping clutches to meet the specific needs of the metal processing industry. Altra products are designed to withstand tough mill environments while providing exceptional personnel safety and equipment protection.

The companies of Altra Industrial Motion offer advanced technologies together with exceptional engineering capability. Our experienced mill application engineers analyze every application challenge in order to provide the optimal power transmission solutions for our customers.

**Annealing Lines**

Bauer BG Series gear motors are a popular choice for use on annealing furnace lines. The units feature grey cast iron gearbox and motor housings, a reinforced fan, high temperature seals, and a heavy duty fan cover. TB Wood’s Dura-Flex elastomeric couplings are often mounted between the drive motors and table rollers. The couplings provide superior fatigue resistance in tough steel mill environments. Heavy-duty Delroyd Worm Gear speed reducers provide exceptional performance when installed on annealing line drivetrains.

**Bauer Gear Motor**  
**Ameridrives Power Transmission** Americardan 2000 & 3000 Series universal joints

**Ameridrives** Amerigear® couplings (AGMA) and SL & SF Series mill spindles

**TB Wood’s** Dura-Flex® couplings

**Bibby Turboflex** Series III couplings and modular torque limiters

**Wichita Clutch** AquaMaKKs™ clutches and brakes

**Delroyd Worm Gear** Speed reducers

**Nuttall Gear** TDS/HPD parallel shaft and Moduline® concentric shaft speed reducers

**Twiflex Limited** MX pneumatic caliper disc brakes

**Accumulators**

Nuttall Gear provides custom-designed drive solutions to meet high tension conditions in accumulator applications including annealing and coating lines.

**Nuttall Gear** Accumulator drives

**Ameridrives** Amerigear® couplings(AGMA)

**Bibby Turboflex** Series III couplings

**TB Wood’s** Dura-Flex® couplings
**Levelers**

Nuttall Gear custom designs multi-shaft leveler drives to meet our customer’s specific roll separation requirements. Ameridrives mill spindles can handle high misalignment due to changes in material thickness.

- **Ameridrives Power Transmission** Americardan 2000 & 3000 Series universal joints
- **Ameridrives** Amerigear® couplings (AGMA) and SL Series mill spindles
- **Nuttall Gear** Leveler drives
- **Twiflex Limited** MX Pneumatic caliper disc brakes
- **Bibby Turboflex** Series III couplings and modular torque limiters

**Slitters**

Heavy-duty AquaMaKKs water cooled clutches and brakes are utilized to control tension on coil slitters and unwinders. Nuttall “zero backlash” slitter drives are custom-designed to accommodate specific slitter performance requirements. Formsprag overrunning clutches are used in threading drives to protect the low speed drives from over speeding when the process is run at full production speeds.

- **Nuttall Gear** Slitter drives
- **Delroyd Worm Gear** Speed reducers
- **Wichita Clutch** AquaMaKKs™ clutches and brakes
- **Ameridrives** Amerigear® couplings (AGMA)
- **Bibby Turboflex** Series III couplings
- **Ameridrives Power Transmission** Americardan 3000 Series universal joints
- **Formsprag** Overrunning clutches
**Pickling Lines**

TB Wood’s Dura-Flex elastomeric couplings are often mounted between the drive motors and table rollers. These couplings provide superior fatigue resistance in tough steel mill environments. Units are easy to assemble, have a high operating temperature and are moisture and chemical resistant. Bauer gear motors are designed for the heavy shock loads of mill pickling line applications. The units feature grey cast iron gearbox and motor housings, a reinforced fan, high temperature seals, and a heavy-duty fan cover. Formsprag overrunning clutches are used in threading drives to protect the low speed drives from over speeding when the process is run at full production speeds.

- **Bauer Gear Motor** BF Series shaft-mounted gear motors
- **Ameridrives Power Transmission** Americardan 2000 & 3000 Series universal joints
- **Ameridrives** Amerigear® couplings (AGMA) and SL & SF Series mill spindles
- **TB Wood’s** Dura-Flex® couplings
- **Nuttall Gear** TDS/HPD parallel shaft and Moduline® concentric shaft speed reducers
- **Wichita Clutch** AquaMaKKs™ clutches and brakes
- **Bibby Turboflex** Series III couplings and modular torque limiters
- **Delroyd Worm Gear** Speed reducers
- **Twiflex Limited** MX pneumatic caliper disc brakes

**Coilers/Down Coilers**

Nuttall Gear heavy-duty, dual-speed drives are custom-designed with customer-specified mandrel shafts for optimum performance in recoiler applications. Bauer gear motors and Bibby torque limiters are also utilized in coiler drive trains.

- **Ameridrives Power Transmission** Americardan 3000 Series universal joints
- **Bauer Gear Motor** BF Series shaft-mounted gear motors and BG Series helical in-line gear motors
- **Nuttall Gear** Two-speed recoiler drive
- **Ameridrives** Amerigear® Couplings (AGMA)
- **Wichita Clutch** AquaMaKKs™ Clutches and brakes
- **Delroyd Worm Gear** Speed reducers
- **Bibby Turboflex** Series III couplings and modular torque limiters
- **Twiflex Limited** MX pneumatic caliper disc brakes
**Coating/Galvanizing Lines**

Formsprag overrunning clutches and TB Wood’s elastomeric chemical-resistant couplings are found on a variety of coating and galvanizing lines. Formsprag overrunning clutches are used in threading drives to protect the low speed drives from over speeding when the process is run at full production speeds. In steel processing, low speed drives are used to power the drive rollers when threading the leading edge of a new roll through the process, or after a problem in the line and it has to be restarted. The overrunning clutch will transmit the low speed torque from the threading drive and automatically disconnect or over run when the line is driven at full production speeds.

- **Bauer Gear Motor** BF Series shaft-mounted gear motors
- **Nuttall Gear** TDS/HPD parallel shaft and Moduline® concentric shaft speed reducers
- **TB Wood’s** Dura-Flex® elastomeric couplings
- **Ameridrives Power Transmission** Americadan 2000 & 3000 Series universal joints
- **Ameridrives** Amerigear® couplings (AGMA) and SL & SF Series mill spindles
- **Delroyd Worm Gear** Speed reducers
- **Wichita Clutch** AquaMaKKs™ clutches and brakes
- **Bibby Turboflex** Series III couplings and modular torque limiters
- **Formsprag** Overrunning clutches
- **Twiflex Limited** MX pneumatic caliper disc brakes

**Cranes and Hoists**

Bauer gear motors and Ameridrives Amerigear couplings are often used on overhead traveling bridge crane drives with torque capacity <18,500 Nm (13,644 ft.lbs.). Warner Electric ERD brakes are typically utilized for parking and emergency stopping on travel drives and holding on main hoist drives with torque capacity <10,000 Nm (7,325 ft.lbs.), 250-500 kW. Twiflex caliper brakes perform the same functions on overhead bridge cranes, including ladle hood winches, with a capacity >10 tons. TB Wood’s sheaves are used in upper and lower blocks.

- **Bauer Gear Motor** BF Series shaft-mounted gear motors
- **Ameridrives** Amerigear® couplings (AGMA)
- **Bibby Turboflex** Series III couplings
- **Twiflex Limited** Spring applied Type VCS caliper brakes, MXEA electric disc brakes
- **Warner Electric** ERD/ERDD VAR and ERD/ERDD Gen2 Spring-operated, electromagnetically released brakes
- **Delroyd Worm Gear** Speed reducers
- **TB Wood’s** V-belt sheaves
- **Ameridrives Power Transmission** Americadan C Series wing bearing style universal joints
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Ameridrives Power Transmission
American Zan 3000 Series universal joints
TB Wood's Dura-Flex® couplings
Ameridrives Amerigear® couplings (AGMA) and SL & SF Series mill spindles
Bauer Gear Motor BF Series shaft-mounted geared motors
Nuttall Gear TDS/HFD parallel shaft and Modulinear® concentric shaft speed reducers
Delroyd Worm Gear Pinch roll drives
Formsprag Overrunning clutches
Bibby Turboflex Series III couplings and modular torque limiters
Ameridrives Ameriloc® shaft locking devices

Transfer Tables/Conveyors
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TB Wood's Dura-Flex® Couplings and QT Power Chain® II belt drive system
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Twiflex Limited MX pneumatic caliper disc brakes
Bibby Turboflex Bibbiodr torque limiters
Wichita Clutch AquaMaKKS™ clutches and brakes