

## Productivity Solutions for High Speed Index Packaging Machinery

*Climax keyless locking devices ensure required positional accuracy and repeatability is achieved from drive line components, and eliminate keyed connection failure.*



When high volumes are desired the most common approach is through the use of high speed index packaging machinery. These machines are capable of performing simultaneous actions at multiple stages of the production process, consequently reducing cycle times. The strenuous demands on the machines, especially the requirement of positional accuracy and repeatability from its drive line components, can cause keyed connections to wear out, become out of sync, and break down over time.

Climax keyless locking devices are designed to use in place of keyed connections. KLDs, when used in servo driven sprocket drive systems, deliver zero backlash without accumulated wear or erosion of performance. Installation and removal is performed using simple hand tools when maintenance is required.

### Issues with Traditional Methods in Rotating Applications:

- Keys, keyways, and set screws can damage the shaft and are prone to fretting corrosion
- Shrink and press fits are costly and difficult to install and remove
- QD/Taperlock bushings use keyways where wallowing occurs causing fretting and backlash

Climax Metal Products offers the PT market an unparalleled combination of product quality, extensive inventory, design and application acumen, and flexible manufacturing with attractive lead times. We have unsurpassed knowledge about Keyless Locking Devices and their application.



RBC has been producing bearings in the USA since 1919. In addition to unique custom bearings, RBC offers a full line of standard industrial and aerospace bearings, including:



### Tapered Roller Thrust Bearings

Case-hardened tapered roller thrust bearings for oilfield top drives and swivels. Available in full complement, maximum capacity versions.



### Cylindrical Roller Bearings

Cylindrical roller bearings designed for mud pump pinion and eccentric positions. Fully interchangeable to industry standards.



### Spherical Plain Bearings

Radial, angular contact, extended inner ring, high misalignment. **QuadLube**®, **ImpactTuff**®, **SpreadLock**® Seal, **CrossLube**®, **DuraLube**™, and self-lubricating bearings. Available in inch and metric sizes.



### Keyless Locking Devices

Mechanical bushings used to connect power transmission components onto rotating shafts. Without the use of keyways, KLDs eliminate the problems associated with backlash including fretting, corroding, and wallowing.



### Self-Lubricating Bearings

Radial, thrust, rod ends, spherical bearings, high temperature, high loads. Available in inch and metric sizes. **Fiberglide**® self-lubricating bearings.



### Ball Bearings

Precision ground, semiground, unground. High loads, long life, smooth operation. **Nice**® branded products are offered in caged and full complement configurations.



### Thin Section Ball Bearings

Standard cross sections to one inch. Bore sizes to 40 inches. Stainless steel and other materials are available. Seals are available on all sizes and standard cross sections. Super duplex configurations.



### Needle Roller Bearings

**Pitchline**® caged heavy duty needle roller bearings ideal for cross head bearings applications. These double row bearings are available in single row and **Tandem Roller**® versions.



### Tapered Roller Bearings

Single, double, & multi row versions available for main bearing positions in mud pumps, gear boxes, etc. Bearings are constructed of case hardened steel washers and rollers with bore size of 11" or greater.



### Lubron® Bearings

**Lubron**® self-lubricating bearings designed and custom manufactured in most any size, material and bearing configuration. Applications include hydro power and water control, nuclear power generation, infrastructure, architecture, offshore marine, industrial, machinery and heavy equipment.



### Rigid Couplings

Shaft couplings serve as components to time, join, or align shafts at lower speeds and torque, especially when zero backlash is desired. Made from mild steel with a black oxide finish, type 303 stainless steel, or aluminum. Available in inch and metric sizes.



### Cam Followers

Standard stud, heavy stud, yoke type, caged roller followers. Patented **RBC Roller**® cylindrical roller cam followers, **HexLube**® universal cam followers, airframe track rollers.



### Commercial Rod Ends

Commercial and industrial, precision, Mil-Spec series, self-lubricating, and aircraft. Sold under the **Heim**®, **Unibal**®, and **Spherco**® names. Available in inch and metric sizes.



### TP Series Bearings

RBC's TP Series cylindrical roller thrust bearings ideal for crane hooks, oil well swivels, winch systems, and gear boxes. Fully interchangeable with industry standard offering.



### Shaft Collars

Used to position or locate a component on a shaft. Made from mild steel, type 303 or 316 stainless steel, aluminum, or acetal. Available in inch and metric sizes.



### Specials

RBC manufactures many specialty bearings for the aerospace, oil and energy, semiconductor equipment, packaging, transportation, and other industries.



### PIC Design

Complete line of precision gears, precision hardware, timing belts, pulleys, and linear motion systems. Industries served include industrial, aerospace, defense, medical, robotics and automation, material handling, and assembly. Custom design support for unique applications.