CLIMAX
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KLDs Eliminate Problems Associated with Keyed Connections in Car Wash Tunnel Conveyor Systems

Climax keyless locking devices provide an alternative to traditional keyed connections in Car Wash Tunnel Conveyor applications, proving to be cost-effective and maintenance-friendly.

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
- Splines, prone to fretting and require expensive machining

Providing customers a seamless car wash ensures that they leave the facility happy and with a clean car. Although the requirement for equipment maintenance may seem daunting and costly, proper maintenance of a car wash is extremely important in providing a positive experience. Many car wash facilities incorporate the use of an underground tunnel conveying system that moves the vehicle through the washing process. Typically this type of car wash system can reach upwards of a half-million dollars in equipment.

Traditionally, manufacturers use a keyed connection to mount the chain sprocket to shafting. Shaft/hub connections in the car wash conveying systems are subjected to harsh and strenuous loads which can lead to shaft fatigue failures of keyed connections resulting in extensive downtime and reduced profitability.

Using a Climax keyless locking device provides a 360° contact mechanical interference fit eliminating backlash associated with keyed connections. By eliminating the shaft keyway and associated notch factor, keyless locking devices allow for a shaft that is 30% stronger. For sprockets, the use of a KLD assure no axial movement occurs during installation, eliminates problems associated with shock loading, and resists corrosion due to high contact pressure.

Where maintenance is required, Climax KLDs are field serviceable and can be easily removed and reinstalled using simple hand tools, eliminating the need for an expensive and timely maintenance process. Climax engineers have the ability to engineer custom designs including stainless steel and various plating options for corrosive environments.

Innovation. Commitment. Quality.

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

Pitchlign® 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.

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