



TM

TURNING IDEAS INTO ENGINEERED SOLUTIONS



Featuring RK and MT
Series bearings
specifically designed for
the special requirements
of today's high tech
ergonomic material
handling equipment.



www.kaydonbearings.com

Bearings designed to improve performance and lower manufacturing costs

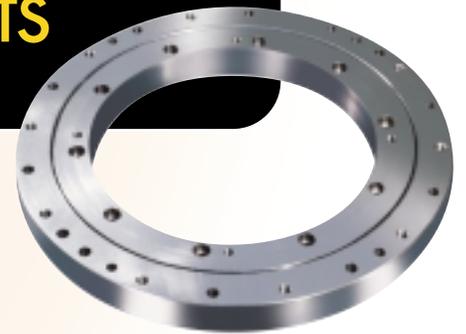
- **Replaces “king post” style –**

more cost-effective designs reduce space, components, and hassle

- **Greater design flexibility –** handle light, medium, and heavy-duty loads, broad size range from 50mm to 870mm bore

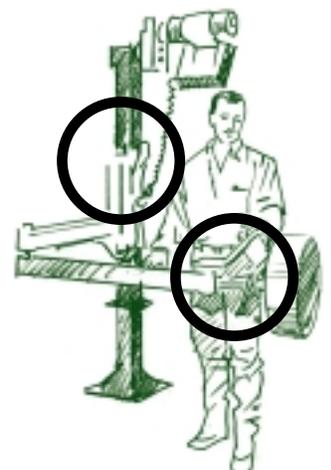
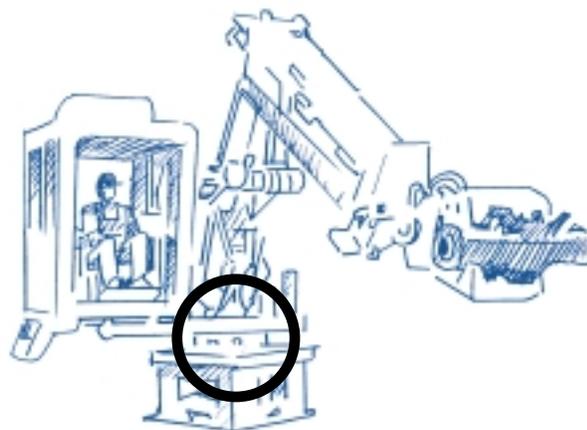
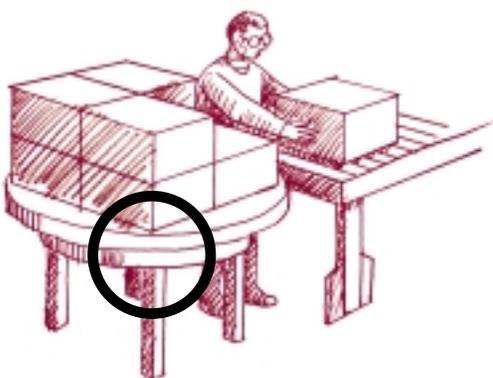
- **Simple installation –** standard bolt hole patterns for efficient mounting, no shimming, no adjusting for clearance

- **Available from stock**



Non-geared MT-Series available in 50mm to 324mm bore.

lift assists • modular rotating equipment • assembly tables • balancing arm



**RK Series
12" – 39" bore**



RK Series medium duty bearings are ideal for turnstile, turntable, transfer line, and shop-floor assembly equipment applications.

Available from stock, Kaydon's RK Series bearings provide cost-effective solutions for material handling applications such as rotary tables, lifts, industrial positioners and transfer tables. These single row four-point contact (slewing ring) ball bearings offer high performance and reduced weight, plus optimized geometry that makes them easier to use and apply. The race geometry is designed to handle a combination of thrust and moment loads. Ball paths are induction hardened to ensure long life.

RK Series bearings feature standard bolt holes that make mounting easy. Available in bore sizes from 12" to 39" with internal and external gear, and non-geared configurations. Matching pinions are also available from stock.

**Standard MT Series
145mm – 870mm bore**

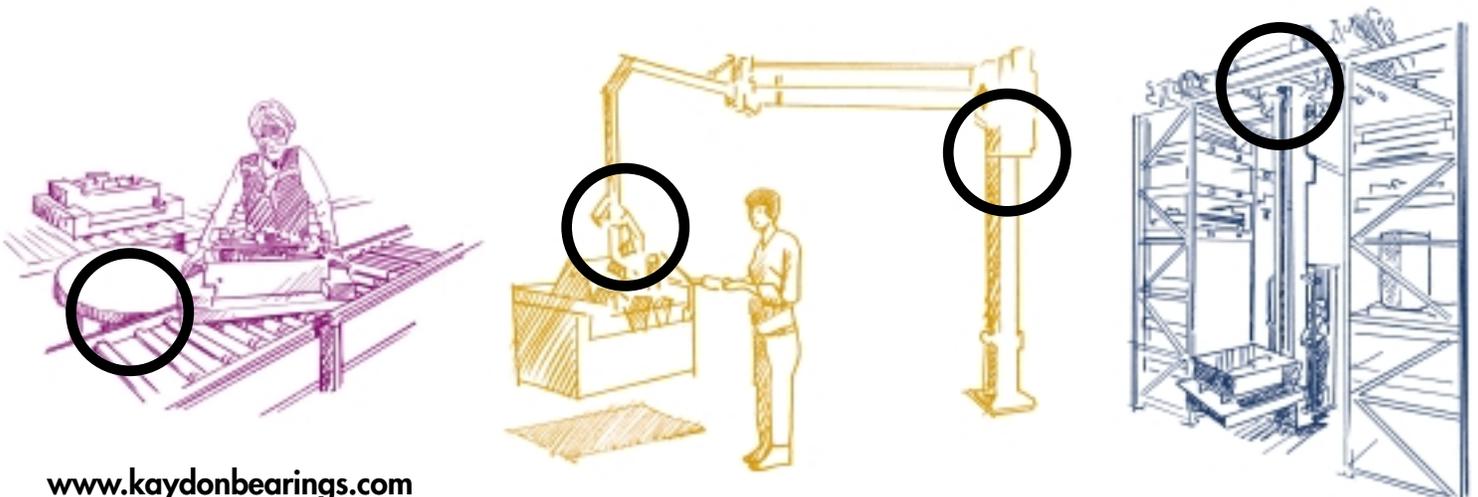


MT Series medium to heavy-duty bearings offer increased design flexibility for work positioners, articulating arms, and industrial tables.

Kaydon's standard line of MT Series turntable bearings is ideally suited for medium and heavy-duty applications, including primary load bearings for ceiling or floor-mount manipulator pedestals, pallet transfer systems, and cranes.

MT Series bearings are an economical replacement for kingpost designs and feature four-point contact ball design for exceptional radial, thrust, and moment load capacities, making them ideal for overhanging loads. Available with or without external gears, MT Series bearings are available in 145mm to 870mm bore sizes.

• cranes • arms • automated transfer lines • rotary tables • ceiling-mounted



**Small Bore MT Series
50mm – 170mm**



Small bore MT bearings improve your design and lower manufacturing costs of manipulators, articulating arms, lift-assists, and balancers.

If you develop and manufacture ergonomic lift-assist devices, work positioners, and articulating arms, there's a Kaydon bearing that can increase your design flexibility. It's a bolt-up bearing in popular compact sizes, and it eliminates the limitations imposed by traditional king post configurations so only one bearing is required in your assembly instead of two.

Engineered especially for manipulators and jib cranes, Kaydon's small bore MT Series bearings are available in bore sizes from 50mm to 170mm. This series also incorporates a sealing system designed for minimal friction and contamination exposure. This compact,

pre-engineered bearing package is designed to simplify your overall design, saving weight and space.

How the small bore MT Series bearing gives you a better design for less.

Conventional bearings used in manipulators and articulating arms are complex and costly because they are usually mounted in the traditional "king post" design. Kaydon simplifies the design process with a single bearing installation that provides exceptional radial, thrust, and moment load handling, and features pre-engineered bolt holes for convenient assembly. There are fewer parts and less weight, so the bearing assembly requires less space. As shown in Figure 1, the shaft itself placed a constraint on how much weight (moment load) the equipment could handle. Small Bore MT series bearings (Figure 2) let you reconfigure for more efficient designs, providing even greater moment load capacities. Eliminating the solid king post-style shaft also lets you route other components, such as electrical, air, and hydraulic lines through a larger center hole, thus allowing greater design flexibility.

Figure 1: old design

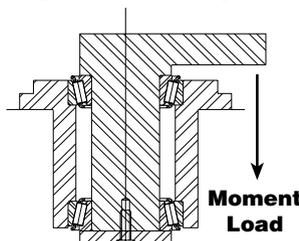
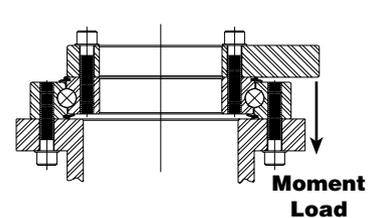


Figure 2: better Kaydon design



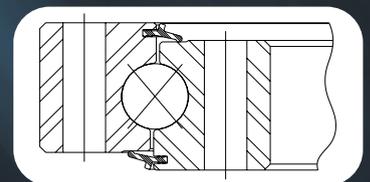
manipulators • lift tables • floor-mounted manipulators • power rotators

Four-point contact ball bearing benefits

The four-point contact ball bearings profiled in this brochure provide distinct advantages to the designer of material handling equipment. These bearings can accept combinations of radial, thrust and moment loads due to the unique geometry of the raceways (or ball grooves). The ball groove in each race has two radii that are larger than the ball radius. The centers of these two radii are offset from the center of the ball radius. This results in a "gothic arch" configuration in each of the raceway grooves, making it possible for the two grooves to contact the ball at four points.

High thrust and moment capacity is obtained in a four-point contact ball bearing by its deep raceway grooves. These allow high initial contact angles between the balls and the raceways, thereby increasing the thrust and moment capacity. The deep grooves also accommodate the contact angle increase, which results from ring stretch and ball deflection under load.

Precision grinding of raceways is necessary to control accuracy of contact angles, close ball to raceway conformity, diametral clearance and raceway finish. These design features, along with proper material selection, assure the proper function of the four-point contact ball bearing.





Kaydon bearings are built for the special design requirements of ergonomic material handling equipment... the right combination of load handling, reliability, compact design and lowest manufacturing costs.

**FREE
Design Review
(800) 514-3066**

KAYDONTM

Today, manufacturers rely on technology to take the brute force out of material handling. Increased automation, intelligent transfer lines, overhead and floor-mounted manipulators, lift-and-rotate tables are all coming on stream to reduce the manual handling tasks that now make up the annual estimated 35% of total workers' compensation claims.

With OSHA-mandated ergonomics programs in place, and additional legislation on the horizon, equipment designers are constantly searching for new ways to improve the systems they design and produce. Attention to improved ergonomics is no longer an option, it's fast becoming the law.

Bearings are critical components in today's ergonomic material handling devices. They must stand up to a wide range of overhanging and rotational loads yet maintain positioning accuracy. If you develop and manufacture ergonomic material handling equipment- lift-and-rotate tables, overhead rails, articulating arms, conveyors, transfer lines, storage and retrieval systems, lift-assists and load positioners- Kaydon has the right bearing to increase your load capacity, expand your design flexibility, improve performance and lower your cost.

www.kaydonbearings.com



Kaydon RK Series and MT Series bearings are engineered to lower your costs, improve your design flexibility, and provide performance like no other bearings on the market. Contact us today for a free design review.

Kaydon bearings benefit you as a material handling equipment producer, by providing higher load-handling capacities, lighter weight, and increased design flexibility.

And because we are experts at providing custom as well as standard design solutions, remember to ask about our prototype capabilities, too. Just contact our application engineers today by phone, fax, e-mail, or through our web site at the addresses listed below.



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