



Kaydon **infinite**®  
bearing solutions



# Streamlined design, heavy-duty performance

When weight savings and corrosion resistance are critical, you need WireX® wire race bearings. Proven effective in a variety of military and commercial applications since Kaydon Bearings introduced them in the 1970s, they give you the load capacity of steel bearings with 60% less weight.

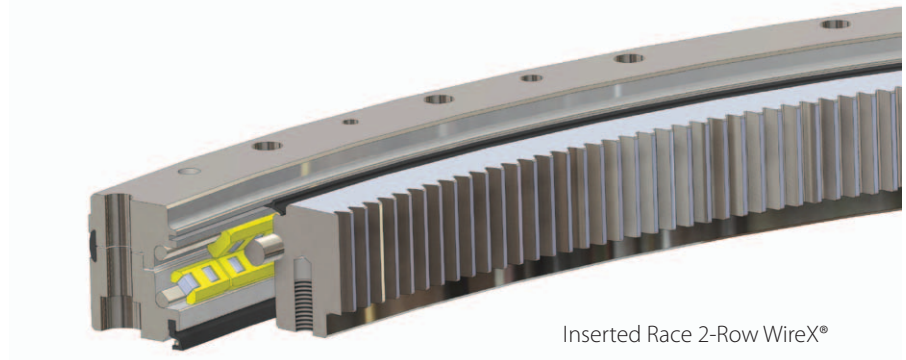
WireX bearings have stainless steel wire raceways in aluminum (or steel) support rings. In addition to saving weight, this design is more tolerant of non-rigid or out-of-flat mounting structures since it minimizes increases in rotational torque.

With stainless steel wire and rolling elements and anodized aluminum support rings, WireX bearings are very corrosion-resistant. They also offer thermal compatibility for support rings and mounting structures (i.e., aluminum with aluminum, or steel with steel).

WireX® wire race bearings have O.D.s up to 165" and bores down to 20", with typical radial and axial runouts of .010". Gear teeth can be cut in the inner or outer ring. Bolt holes are provided for mounting.

Various configurations are available, usually custom-designed to support a specified combination of thrust, radial and moment loads. The most common designs are:

- **Cross-roller (bi-angular)** – rollers alternate from 1 axis of rotation to another (Fig. 1)
- **2-row roller** – 2 rows of rollers ride on 3 wires (Fig. 2)
- **3-row roller** – 2 sets of thrust rollers with 1 set of radial rollers OR 1 set of thrust rollers with 2 sets of radial rollers (Fig. 3)
- **Custom designs** – double-row roller bearings, ball bearings and more



## Examples of successful applications



Tank



Missile launcher



Ground combat vehicle



Shipboard guns



LAV

# Technical details

Figure 1

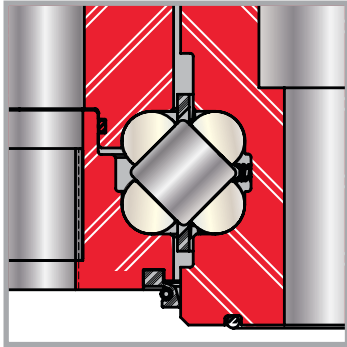


Figure 2

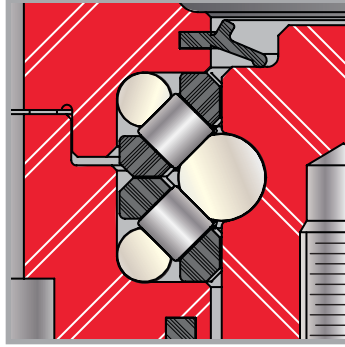
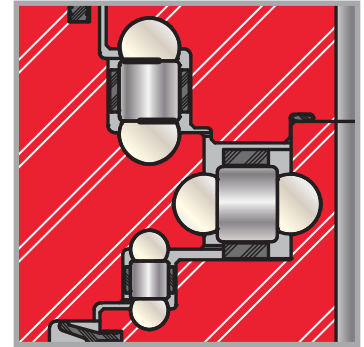


Figure 3



## Bearing overview and selection guide

Typical Cross Section	General Description	Rolling Element	Inside Diameter	Outside Diameter	Gear Options
Figure 1	Inserted Race Bi-Angular WireX®	Roller	min. 20"	to 165"	<ul style="list-style-type: none"> <li>■ Non-Geared</li> <li>■ Internal</li> <li>■ External</li> </ul>
Figure 2	Inserted Race 2-Row WireX®	Roller	min. 20"	to 165"	<ul style="list-style-type: none"> <li>■ Non-Geared</li> <li>■ Internal</li> <li>■ External</li> </ul>
Figure 3	Inserted Race Three-Row WireX®	Roller	min. 20"	to 165"	<ul style="list-style-type: none"> <li>■ Non-Geared</li> <li>■ Internal</li> <li>■ External</li> </ul>

# Design Options

## Bearing (Housing) Rings

- Steel
- Aluminum

## Coatings

- **Anodized:** MIL-A-8625
- **Electroless Nickel:** SAE AMS-C-26074
- **Phosphate:** MIL-DTL-16232
- **Paint:** MIL-C-53039 (CARC)

## Rollers

- 440C stainless steel

## Wires

- Single flat wire
- Double flat wire
- Both are of precipitation-hardened stainless steel

## Separators

- Polymer

## Seals

- **Material:** nitrile, neoprene, silicon, fluorocarbon, or EPDM
- **Style:** Face-riding or Garter Spring Land-riding

## Lubrication

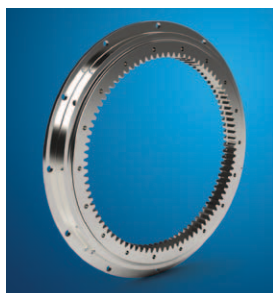
- MIL-PRF-81322
- MIL-PRF-23827
- MIL-G-21164

Kaydon  
**infinite**  
bearing  
solutions



# Global leadership in standard, custom and remanufactured bearings

Kaydon Bearings Division is a major producer of new, remanufactured and new replacement bearings. We offer a wide range of standard configurations plus advanced custom bearings to meet specific application needs.



**Slewing Ring Bearings** – Choose from 4-point contact ball, 8-point contact ball, cross-roller, and 3-row roller bearings, from 2 inches to 240 inches in diameter. They are available with no gearing, internal gearing or external gearing. For details, download or request Catalog 390.

**Thin Section Bearings** – Reali-Slim® bearings deliver high dynamic capacity in a compact size, with a cross-section that stays constant as the bore increases. Bore sizes range from 1" to 40" (20 mm to 360 mm) and cross-sections from 3/16" to 1". For details, download or request Catalog 300.



**Remanufactured Bearings** – Kaydon remanufactures worn bearings to perform like new, with a full-year warranty and fast turnaround. We can handle diameters from 10" to 240". For details, download or request our Remanufactured Bearings brochure.



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