

Custom Bearing Capabilities

In addition to the more standard bearings shown on earlier pages, Kaydon has extensive experience in the design and manufacture of customized or special bearings and assemblies. This experience allows us to match the product to the requirements.

The ball and roller bearings shown below are only a sampling of our custom capabilities, provided to further inspire your creativity to find the optimum solution.

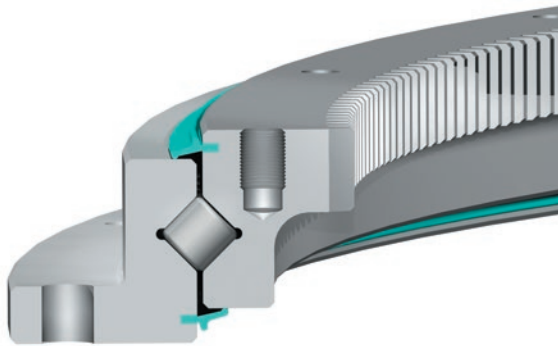


Figure 5-1

A thin-sectioned cross roller bearing combines the features of higher stiffness, increased dynamic capacity, and lower turning torque with weight and space savings. Rollers may be oriented as needed to maximum load carrying ability and fatigue life. Designs with similar configurations and features range from 15 inches to over 90 inches.

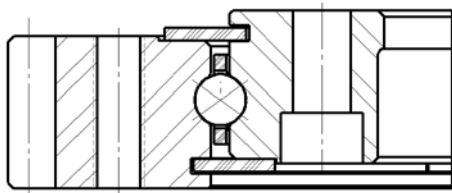


Figure 5-2

A thin-sectioned large diameter bearing with external gear made from special stainless steel rings, plastic rolling elements, and separator for low permeability and to limit out-gassing. Use of plastic rolling elements also permits operation without lubrication. Similar designs and components have been produced for sizes up to 70 inches.

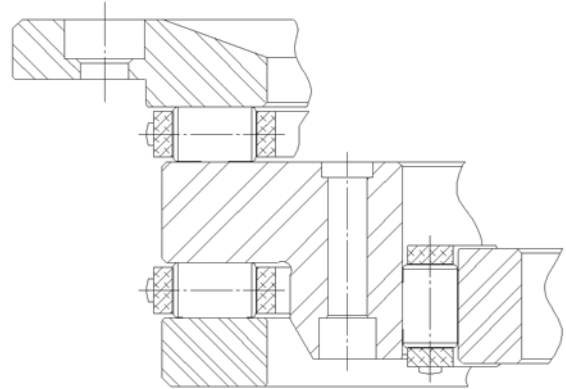


Figure 5-3

A complex three-row roller bearing with minimal raceway material provides the customer with light weight and space saving opportunities. The thin sections and unusual configurations permit compact overall design. Three separate rows of rollers permit use in applications with simultaneous as well as reversing radial, axial, and moment loads. Roller complement and raceways may be oriented and designed to optimize capacity and fatigue life as well as stiffness. Designs with similar features have exceeded 90”.



Figure 5-4

A three ring, two-rolling complement bearing with two integral gears, one on the inner and one on the outer ring is shown. This configuration when combined with precision components permits accurate, smooth, independent, and synchronized rotation of the rings and any attached components. Use of a separator increases the bearing's operating speed capability and, combined with low friction seals, permits minimal rotational resistance. The total package significantly reduces the number of components needed to perform the same functions as this design currently does.

Custom Bearing Capabilities (continued)

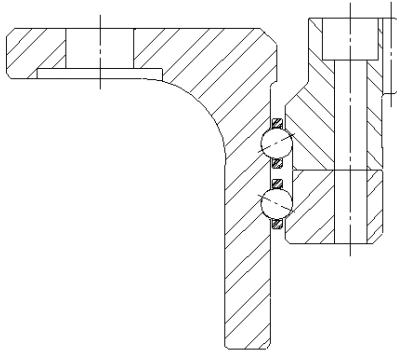


Figure 5-5

This flange mounted, thin-sectioned large diameter bearing is light weight, requires minimal space, and fits around existing components. The flanges are scalloped between holes to provide greater weight reduction. The use of double row angular contact rolling complement with separators provides minimal rotational resistance and can be used for high accelerating conditions as well as very high continuous operating speeds. The high precision gear on the inner ring provides for accurate positioning.

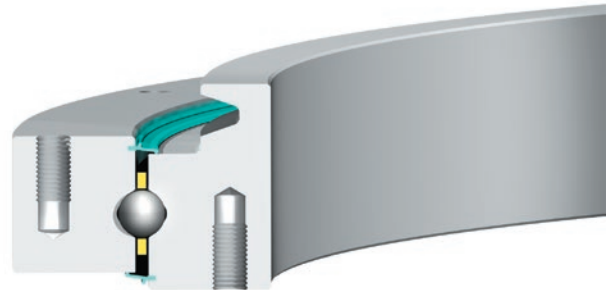


Figure 5-6

A four-point ball bearing with integrated v-belt groove in one ring permits a simple mechanical drive option at low cost with no lubrication and minimal maintenance.

Belt drive designs, flat or tooth, are potential alternative solutions depending on application conditions. Use of a separator increases the bearing's operating speed capability and, combined with low friction seals, permits minimal rotational resistance.