

Custom Roller Bearings

AIRCRAFT CARGO SYSTEM

PROBLEM

A major manufacturer of aircraft cargo systems needed a roller bearing solution for a new medium-size transport aircraft. The flexible aircraft, the heaviest that the company has made, is able to perform aerial refueling and transport troops or up to 23 tons of cargo, including wheeled armored vehicles. In order to ease the careful packing of cargo pallets, the entire length of the cargo deck system is lined with as many as 1000 roller bearing assemblies.

SOLUTION

To meet the aircraft's weight restrictions, Kilian™ developed a custom bearing design consisting of a precision-machined, profiled aluminum roller and two precision-machined sealed race bearings that are pressed into a cartridge. The bearings are swaged in place allowing the customer to install them into trays that make up the cargo system. Each bearing is mounted into a tray and supported by a titanium pin which keeps the bearing assembly firmly attached to the tray.



HIGHLIGHTS

- Precision-machined aluminum roller for reduced weight
- Two press-fit race bearings for added precision and efficiency
- Bearings are swaged in place

Regal Rexnord

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