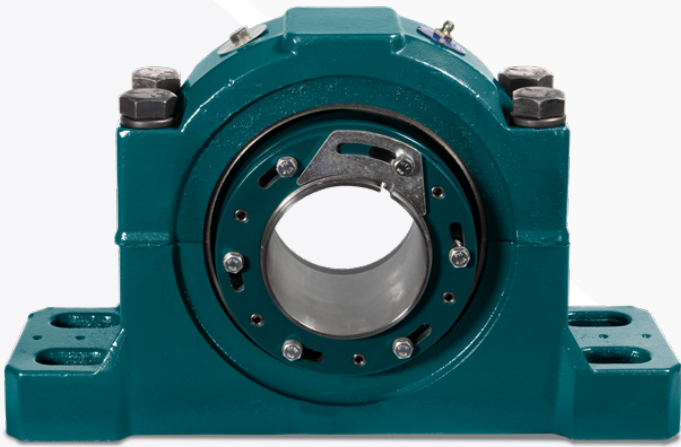


Eliminating Waste, Not Savings

Wastewater industry



Synopsis

- ◆ Application: Rotating biological contactor (RBC)
- ◆ Problem: SAF-style bearing failure with lengthy maintenance
- ◆ Solution: Safety Mount™ mounted spherical roller bearings

The problem

A large wastewater treatment plant in the northeastern US uses 96 RBCs to remove organic material from the water, ensuring the water is safe to be released back into the environment.

RBCs are a biological wastewater treatment system in which multiple media discs are shaft mounted and partially submerged in influent water. As the shaft turns at approximately 1.5 revolutions per minute, microorganisms on the discs are alternately exposed to water and air—providing them with the organic matter in the water as a food source and oxygen for proper digestion, resulting in the removal of unwanted material.

Running around-the-clock, RBCs carry heavy loads and are supported by a 25-foot shaft with a mounted bearing on each side. The bearings are located just inches from the water and exposed to constant splashing and corrosive elements. SAF-style bearings are commonly used in this application, but their ineffective sealing systems and grease path design fail to prevent contamination and clean grease from accessing the rolling elements, leading to premature failure. Their replacement requires specialized maintenance procedures, a crane, and up to 26 hours of labor for the replacement of a single bearing—creating a significant pain point for operational maintenance.

The success

In addition to being a drop-in replacement for SAF-style bearings, Safety Mount's easy installation and removal made it the ideal choice for plant management to streamline maintenance, resulting in an

average annual savings of

\$156,863



4x faster installation than the competition

Minimize tools, risk, and time to maximize reliability, uptime, and savings



Because RBCs operate so slowly, equipment failure often isn't found until it's too late. The failure on this RBC wasn't found until the media assembly shifted, contacting the concrete and tripping the motor.



In addition to switching to Safety Mount for its superior seals and quick installation, the plant transitioned to a complete Dodge drive package with BioDisc gear reducers and desiccant breathers for enhanced reliability and valuable savings.

The test

Premature failures due to contamination and lengthy replacements of existing SAF-style bearings led plant management to seek a more reliable solution and make the switch to Safety Mount for their RBC applications.

The results

Upon first installation of Safety Mount, plant management realized the value of a significantly faster and easier installation—saving 16 hours of labor per bearing over the SAF-style bearings. Its enhanced reliability and reduced maintenance had an immediate positive impact on efficiency, leading them to standardize operations with Dodge®.

The why

A drop-in replacement for SAF-style bearings, Safety Mount features an innovative design for the fastest installation and removal on the market. Its patented push-pull tapered adapter system is optimized with predetermined drive-up, eliminating the need for feeler gauges and manual calculations to reduce labor and improve reliability. Safety Mount's efficient design provides a direct path for grease to access the rolling elements, ensuring correct lubrication and facilitating the purging of old grease. Its mechanically-retained triple-lip seal prevents contamination and seal blowout. Built to revolutionize mounted spherical roller bearing installations, Safety Mount is the premier solution for critical applications.

1-year documented savings

