

# MIBA INDUSTRIAL BEARINGS

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## Solving Hot Running Bearings

*Improved performance and without compressor modifications*

Miba Industrial Bearings manufactures custom-engineered designs and bearings built to customer prints, but even when asked to build the customer's design, we may recommend improvements to optimize the bearing for the application.

One such case was a compressor company based in the US who contacted Miba for input concerning some hot running bearings in the field.

### Design changes

Miba provided bearing data for the existing customer design and a new high-performance Advantage bearing with pocket feed direct lubrication, copper chrome pads and pad cooling orifices.

The Advantage design reduces hot oil carryover between pads, so that fresh cool oil and hot oil are mixed as little as possible. After the leading edge wiper deflects the exiting hot oil from an adjacent pad, cool oil is fed directly to the pocket, for optimal lubrication efficiency. The copper chrome base material has 6 times the thermal conductivity of steel, and cooling orifices reduce the maximum bearing temperatures even further.

Miba predicted a temperature reduction of 30F/ 17 C with the upgraded design and was able to design a drop-in replacement bearing, so no compressor modifications were necessary.

### Results

The existing field bearing was running at **246F / 119C**, and after installing the upgraded Advantage bearings, the analysis confirmed the bearing temperatures were reduced **38F / 21C!** The customer was so happy with the outcome that they are considering making the new upgraded Miba design their new standard for future compressor production.

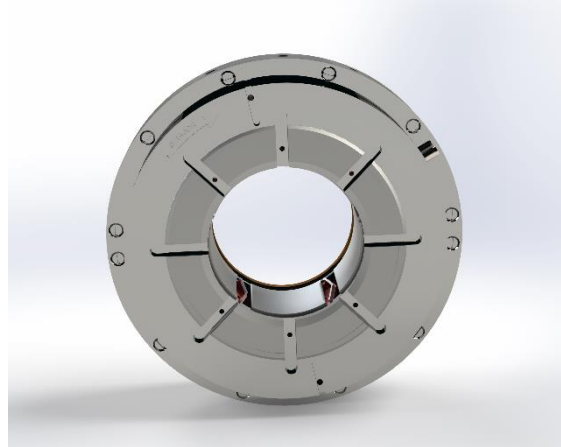
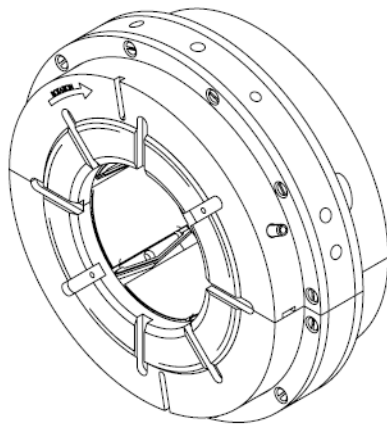


Figure 1: Advantage Bearing Design

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