

RBC Aerospace Bearings

AeroCres® Reduced Maintenance Ball Bearings

RBC's AeroCres® bearings minimize maintenance to reduce downtime

RBC's AeroCres® bearings provide a system solution to significantly reduce maintenance & downtime. These bearings utilize a proven material combination that has been providing advanced corrosion resistance in demanding application conditions for many years.

RBC is the first bearing manufacturer to be qualified to the Aerospace standards for CREN ball bearings.

This dependable bearings solution helps reduce the total maintenance and downtime cost.

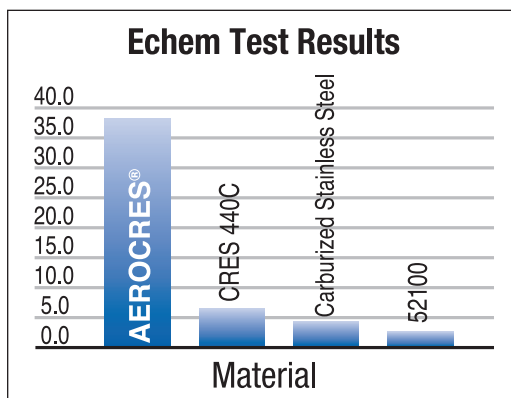


Bearing Steel

A proprietary heat treatment of a 400 grade stainless steel produces the advanced material used in RBC AeroCres® bearings. This unique steel provides outstanding corrosion resistance and performance characteristics that are superior to traditional bearing alloy steels under typical operating conditions.

Electrochemical and environmental testing demonstrate unmatched corrosion resistance – 38 times greater than conventional 52100 bearing steel and 8 times over 440C stainless steel. Also, improved fatigue resistance enables bearings to withstand greater loads for longer cycles.

Relative corrosion resistance after electrochemical test.



System Solution Benefits

Maximum Corrosion Resistance – Unique bearing package withstands corrosion in flight tested environments through the combination of special steel, seal, and lubricant.

Advanced Steel – Proprietary technology produces a superior material that is 38 times more corrosion resistant than 52100 steel and 8 times greater than 440C stainless steel.

Bolt-On Replacement – Design permits direct interchange with existing bearings.

Approval – Bearings in approval for multiple SAE industry standards.

Grease Options – AeroCres® are available with many grease formulations to provide the optimum lubricant for the application conditions.

Reduced Downtime – Reliable design extends the regular maintenance cycle and minimizes unscheduled bearing replacement.

Extended Service Life – Bearings are designed to resist corrosion and will last well beyond the life of traditional bearing materials.

Cost Efficiency – Less bearing related downtime saves maintenance time and money.



ISO 9001:2000
AS9100

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Salt Spray Corrosion Testing

Test Results after 500 hours.

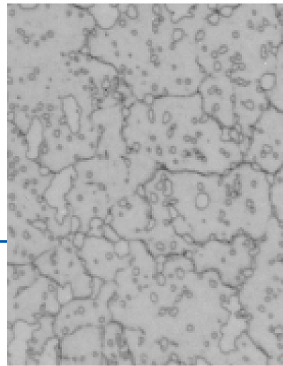
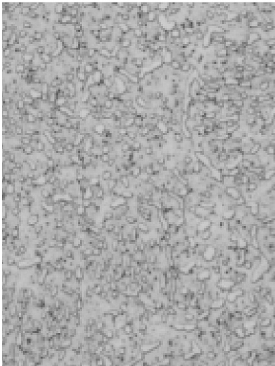


Microstructure AeroCres® fracture-tough material (left) vs. CRES 440C (right).

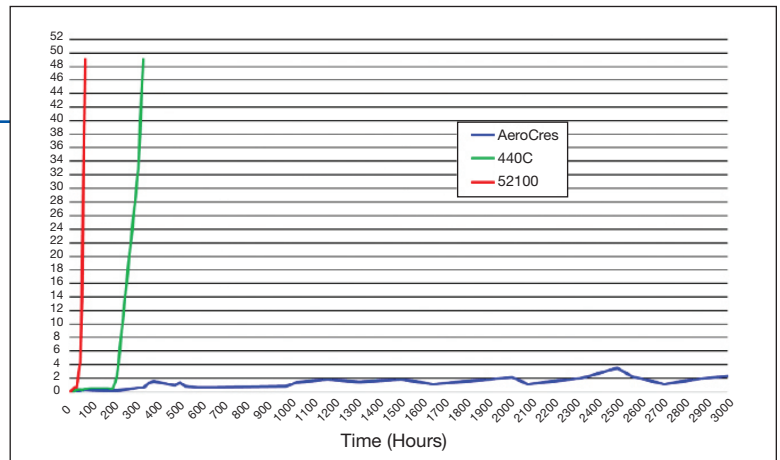


Salt Spray Corrosion Test Torque

Torque over 50 in-oz is considered locked up and the bearing is unusable.



AeroCres vs 440C vs 52100 Salt Spray Test Results



Microstructure AeroCres® vs CRES 440C

The ultrafine dispersion of nitrides/carbonitrides in **AeroCres®** (left) vs. coarse carbides in CRES 440C (right) results in improved life and corrosion resistance.

Approvals

AS27640/1 AS27641/1 AS27642/1
AS27646/1 AS27648/1 AS21428/1

Engineering Support

Application Consultation Product Design
Product Testing Metallurgical Analysis



ISO 9001:2000
AS9100

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