



KAHR-LON® K-HELO-1C™

Industry Leading Rotorcraft Bearing Technology



*Self-Lubricating
Liner System for
Military / Defense
Applications*

*RBC® Aerospace has a full line of bearing products which feature the proprietary **K-HELO-1C™** liner in support of rotor applications.*

Innovation. Commitment. Quality. _____

KAHR-LON® K-HELO-1C™

Industry Leading Rotorcraft Bearing Technology for Military/Defense Applications



KAHR® Bearing's K-HELO-1C™ stands out as the only liner system in the world qualified to the rigorous SAE AS81819 standard. This demanding testing protocol ensures that our self-lubricating liner systems can withstand the harshest conditions which includes water, hydraulic fluid/oil, turbine fuel, lubrication oil, anti-icing fluid and solid contaminants such as dust.

Durability and resistance to excessive wear means longer maintenance intervals, leading to less downtime and lower operational costs.

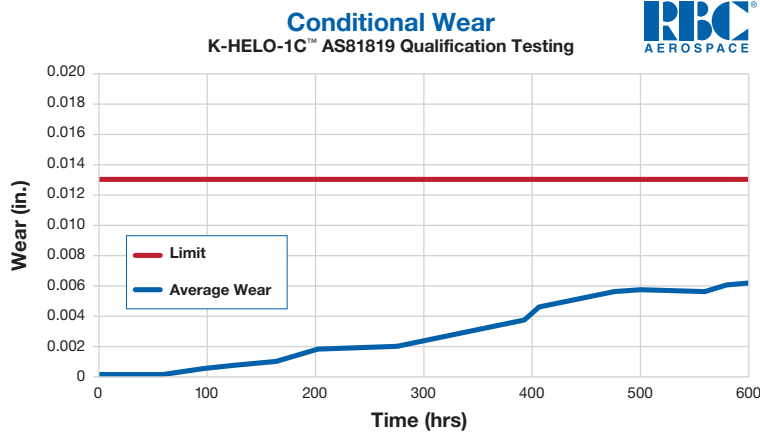
Overall, K-HELO-1C™ enhances efficiency and reliability in demanding applications. The K-HELO-1C™ liner system has proven to be the preferred option for critical flight safety applications.

Rotorcraft Applications:

- Pitch Links Bearings
- Damper Bearings
- Lead Lag Joints
- Scissor Bearings
- Many Others

The Future of Long Life Liners

- ✓ High Speed Low Load Applications
- ✓ AS81819 QPL Qualified
- ✓ 600+ Hours of Testing
- ✓ Proprietary Ceramic Kahrbonite™ Counterface



Dynamic Testing

This liner system undergoes robust laboratory testing and continuous validation, including specific customer testing. RBC Bearings® is dedicated to exceeding customer requirements through continuous investment into research and development.

KAHR-LON® Self-Lubricating Liner Systems and Capabilities

KAHR-LON® Self-Lubricating Liners are engineered composite systems that provides longer life and low friction for Military / Defense applications. **KAHR-LON®** liners utilize high-strength fabrics and phenolic resins to create a composite with maximum shear and tensile strength. In addition, our liners are bonded with high-performance thermosetting adhesives that produce the industry's strongest bond. Once bonded, these liner systems are resistant to high compressive loads, shear loads, and impermeable to contamination under various conditions.

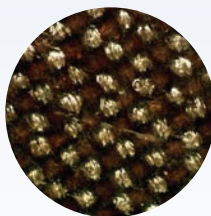
What is a self-lubricating liner?

Woven Fabric

- ✓ PTFE fibers - a low friction, non-reactive polymer
- ✓ Support fibers - provides tensile strength and a bond interface

Resins - provides compressive strength

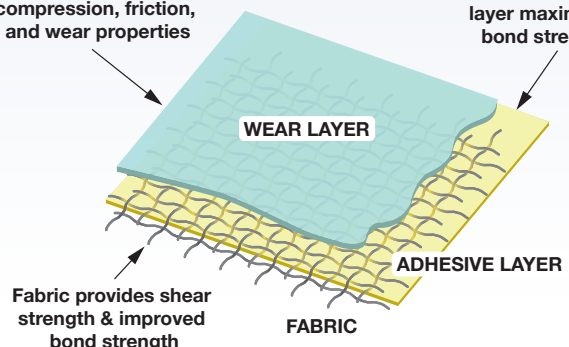
Adhesive Resin - bonds the fabric to a suitable backing material



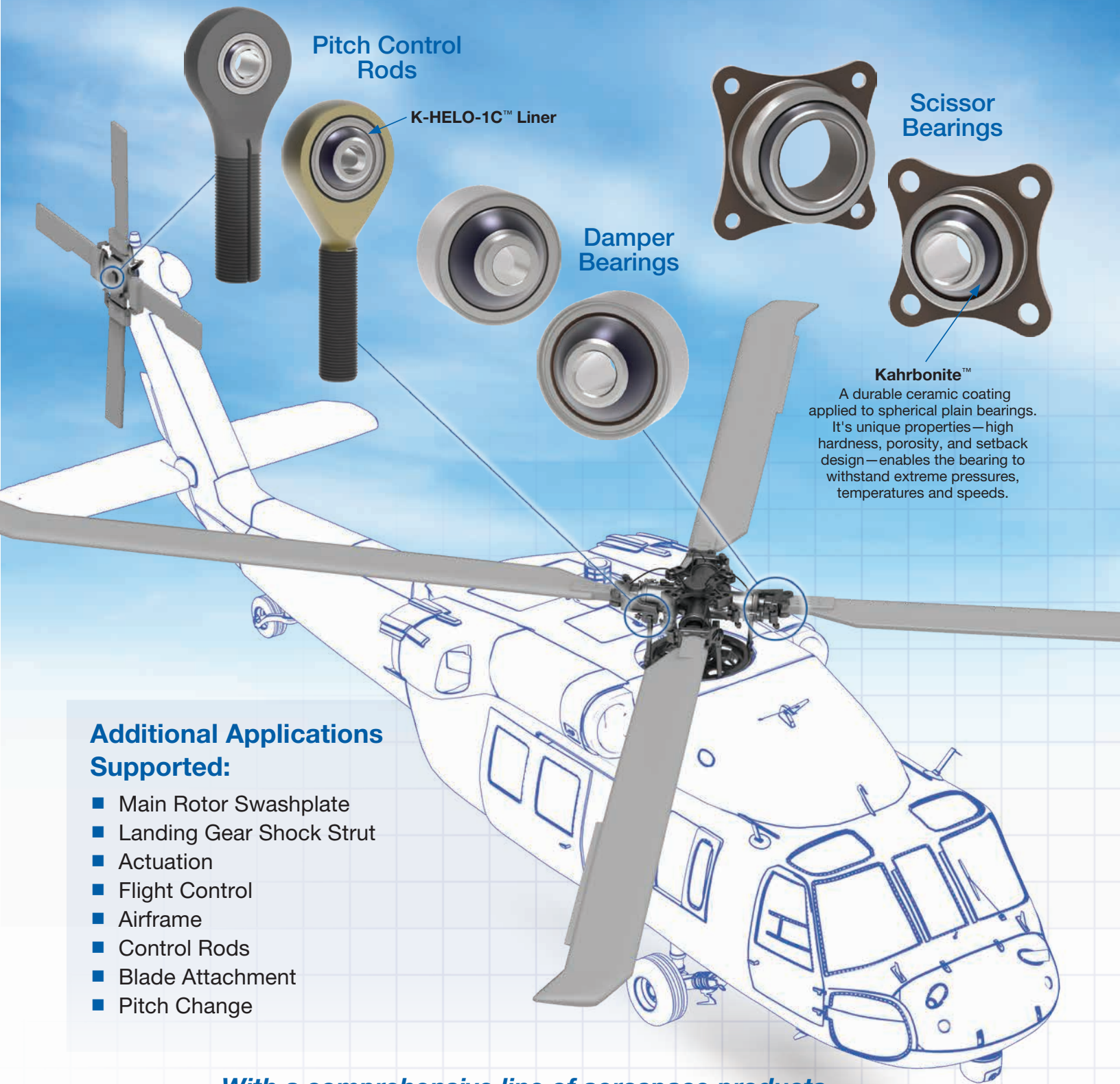
Anatomy of a KAHR-LON® Liner

PTFE enriched wear coat provides improved compression, friction, and wear properties

Pure adhesive layer maximizes bond strength



KAHR-LON® K-HELO-1C™ Liner Applications



Additional Applications Supported:

- Main Rotor Swashplate
- Landing Gear Shock Strut
- Actuation
- Flight Control
- Airframe
- Control Rods
- Blade Attachment
- Pitch Change

*With a comprehensive line of aerospace products,
we have a design solution for your application needs.
Please give us the opportunity to put our technical
and manufacturing resources to work for you.*

RBC Bearings® has been producing bearings in the USA since 1919. In addition to unique custom bearings, RBC Bearings® offers a full line of standard industrial and aerospace bearings, including:



Spherical Bearings

- MS approved to AS81820 (formerly MIL-B-81820)
- Self-lubricating • Metal-to-Metal
- Loader slots • High temperature
- Low coefficient of friction
- Special configurations and materials



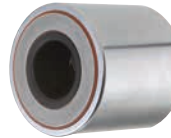
Rod End Bearings

- MS approved to AS81935 (formerly MIL-B-81935)
- Self-lubricating • Metal-to-Metal
- Loader slots • High temperature
- Low coefficient of friction
- Special configurations and materials



Thin Section Ball Bearings

- Standard cross sections to one inch
- Stainless steel and other materials are available
- Sizes to 40"
- Seals available on all sizes and standard cross sections
- Super duplex configurations



Track Rollers

- MS approved to AS39901 (formerly MIL-B-3990)
- ATF single row and ATL double row
- Sealed with lube holes and grooves
- Heavy duty cross sections
- Advanced AeroCres® materials available



Journal Bearings

- MS approved to AS81934 (formerly MIL-B-81934)
- Plain and flanged • Self-lubricating
- High temperature • High loads
- Available in inch and metric sizes



Cam Followers

- MS approved to AS39901 (formerly MIL-B-3990)
- Advanced AeroCres® materials available
- Maximum corrosion resistance
- Superior lubricants & seals to reduce maintenance



Airframe Control Ball Bearings

- MS approved to AS7949 (formerly MIL-B-7949)
- Single and double row
- Radial, self-aligning, and pulley series
- 52100 Cad plated and 440C stainless
- Zinc Nickel plated



Load Slot Bearings

- Spherical and rod end designs
- Superior ball-to-race conformity
- Reduced maintenance cost
- Variety of race materials available



Ball Bearing Rod Ends

- MS approved to AS6039 (formerly MIL-B-6039)
- Various shank configurations
- Low coefficient of friction
- Advanced AeroCres® materials available



Specials

- Many specialty bearings, custom-designed and configured for diverse aerospace applications
- Capability for advanced aerospace specialty corrosion resistant and high temperature materials



Rings and Seals

- Solutions for any pneumatic and hydraulic applications
- Seals from .5" to 55" diameter
- Cast Iron to Rene 41
- Precision machined & wire rings to tight tolerances



Control Rods

- Swaging up to 14' length and 4" diameter
- Nadcap and customer special process approvals including NDT
- Surface treatments, CNC Machining, Flash Welding, Aluminum Heat Treat
- Design and build to print



Specialty Fasteners

- Hollow Bolts, Fuse Pins, Solid Bolts (Standards), Custom Machined Parts & Nuts
- Hot Headed, Thread Rolled, HVOF Coated
- Large Diameter over 3/4"



Ducting Solutions

- Solutions for pneumatic ducting
- Patented couplings
- Temperatures 450° to 1,500°F
- Engines, Aircraft, APUs



Hydraulic Actuators

- 2-Position Fluid Hydraulic
- Auto or Manual Mechanical Locking
- Lock Sensing/Position Sensing
- Flow/Directional Control Valves; Solenoid/Manual



Machined Components

- Exotic materials • 3, 3.5, 4 and 5 Axis
- Horizontal and Vertical Milling
- Lathes, Hot Head, Gearing, Heat Treat, Special Processes

