

# **Aircraft Control Systems**

Control Rods Connecting Links Rod Assemblies Push-Pull Rods Tie Rods ...and more!

SCHAUBLIN<sup>®</sup> SA | RBC BEARINGS<sup>®</sup> POLSKA | RBC AEROSTRUCTURES<sup>™</sup>

Innovation. Commitment. Quality.

# **Aircraft Control Systems**

# **Engineered Solutions Provider**

We offer a wide variety of precision aerospace swaged tubes, control rods, push-pull rods, tie downs, and machined parts built to support commercial and military aerospace applications.

Our products and solutions are backed by years of manufacturing experience, industry expertise and innovative processes. We offer computer-aided design and automation techniques, helping to optimize your design to ensure flight safety and structural integrity.

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This product offering is supported by the expertise of three RBC Bearings entities: **Schaublin<sup>®</sup> SA**, **RBC Bearings<sup>®</sup> Polska** and **RBC AeroStructures**.<sup>™</sup>

## When experience meets engineering, to build better together.



Schaublin<sup>®</sup> SA - Switzerland







RBC AeroStructures<sup>™</sup>- United States

All of our manufacturing and process capabilities are ISO9001, AS9100 and Nadcap certified.



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www.rbcbearings.com www.schaublin.ch

## **Trusted Experience**

**RBC Aerospace**<sup>®</sup> is well known for producing tight tolerance, precision fabricated tubular and machined parts since 1948. Our product offering includes metallic rods, telescopic rods and bungees, which can be swaged, machined, or flash welded. RBC has internal production capabilities to produce spherical & rod end bearings, clevises and other fully machined attachment points.

# **Maintaining Partnerships**

Our long-term partnerships with key aerospace customers and their valued subcontractors reflect our commitment to customer satisfaction and the trust that customers place in our capabilities.



## Manufacturing & Processing Capabilities

We enhance our product offering by providing special processes and capabilities to satisfy your application's stringent requirements. Our current process capabilities include:

- Aluminum Chemical Conversion Coating
- Aluminum Heat Treating
- Cadmium Plating
- CAD/CAM Engineering, Programming & Drafting
- CNC Machining
- Conventional Machining
- Flash Welding
- Fluorescent Penetrant Inspection
- Form Tapping
- Magnetic Particle Inspection
- Painting
- Passivation
- Statistical Process Control (SPC)
- Swaging
- Zinc Phosphate Processing
- TIG Welding

**Some typical applications for fixed-wing and rotary-wing aircraft include:** Control Rods, Push-pull Rods, Connecting Links, Torque Tubes, Rod Assemblies, and Struts.

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# Innovation. Commitment. Quality.

RBC Bearings® has been producing bearings in the USA since 1919. In addition to unique custom bearings, RBC Bearings<sup>®</sup> 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



#### 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



# **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

### 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

### **Ball Bearing Rod Ends**

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

#### **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

#### Specialty Fasteners

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

#### **Hydraulic Actuators**

• 2-Position Fluid Hydraulic

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- Auto or Manual Mechanical Locking
- Lock Sensing/Position Sensing
- Flow/Directional Control Valves: Solenoid/Manual







• Exotic materials • 3, 3.5, 4 and 5 Axis

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- Horizontal and Vertical Milling
- Lathes, Hot Head, Gearing,
- Heat Treat, Special Processes



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This document contains a general overview of the products and features described herein. It is solely for informational purposes, does not represent a warranty of the information contained herein, and is not to be construed as an offer to sell or a solicitation to buy. Contact RBC Bearings® for detailed information suitable to your specific applications. RBC Bearings® reserves the right to modify its products and related product information at any time without prior notice. Some of the products listed herein may be covered by one or more issued and pending U.S. or foreign patents. Contact RBC Bearings® for product specific information - or see rbcbearings.com/patents/





- - Surface treatments, CNC Machining,
  - Flash Welding, Aluminum Heat Treat
  - · Design and build to print

## Ducting Solutions

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

#### RBC 06/24





- **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

### 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<sup>®</sup> materials available

### **Cam Followers**

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

# Load Slot Bearings

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

# Control Rods

- Swaging up to 14' length and 4" diameter
- Nadcap and customer special process approvals including NDT