

# Aero**Structures**™

Leaders in Precision Aerospace Hardware

Control Rods Push-Pull Rods Connecting Links Torque Tubes Rod Assemblies Struts Special Processes

# Innovation. Commitment. Quality.

# Aero**Structures™**

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### Building Partnerships

RBC AeroStructures (AeroS) is well known for producing tight tolerance, precision fabricated tubular and machined parts. We also provide Mil-Spec painting, plating and nondestructive testing to the most exacting customer standards in the industry. These standards are enforced by a conscientious work force with each teammate dedicated to quality at every juncture.

As a partner with AeroS, you will reap the benefits of our corporate and group experience since 1948. Through our engineering assistance program we offer our customers the latest in computer-aided design and automation techniques, helping you fine tune your design to take advantage of material and manufacturing savings.

Our Business Systems help us control internal costs and permit us to offer competitive pricing on every job. We purchase material for tubular and machined parts in the most economic quantities and sizes applicable and pass the savings on to you—our partner. We also have full EDI capabilities.

AeroS holds a variety of aerospace certifications including:

- ISO 9001 and AS 9100
- Nadcap Aluminum Heat Treating
- Nadcap Chemical Processing
- Nadcap Welding
- Nadcap Non-Destructive Testing

AeroS continues to investigate new methodologies for improving its manufacturing and quality processes. 100% of our manufacturing

capability is dedicated to the aerospace industry.



Manufacturing Control Rods, Push-Pull Rods, Connecting Links, Torque Tubes, Rod Assemblies, Struts, Tie Downs and Special Processes for over 75 years.





864.886.4600

#### www.rbcbearings.com

### **Maintaining Partnerships**

Our long-term partnerships with key aerospace customers and their valued subcontractors reflect RBC AeroStructure's commitment to customer satisfaction and the trust that customers place in our capabilities. Some typical applications for fixed-wing and rotary-wing aircraft include: Control Rods, Push-pull Rods, Connecting Links, Torque Tubes, Rod Assemblies, and Struts.



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

# **Operating Partnerships**

One of our most important partnerships and our greatest asset is our work force comprised of well trained, reliable teammates, who average over 10 years of employment with AeroS and over 20 years of total experience in metal fabrication and assembly. AeroS teammates are dedicated to ensuring every part leaving our facility meets demanding standards of quality and every shipment gets their stamp of approval!

AeroS is located in northwest South Carolina. We are within short driving distances of Atlanta, GA, Greenville, SC and Asheville, NC. We invite you to call with your inquiries, or better yet, visit and see first hand what we can offer.







# 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), **Customed Machined Parts & Nuts**
- Hot Headed, Thread Rolled, HVOF Coated
- Large Diameter over 3/4"

#### 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



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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.







**Rod End Bearings** 

Track Rollers

• Self-lubricating • Metal-to-Metal

• Loader slots • High temperature · Low coefficient of friction

• Special configurations and materials

• ATF single row and ATL double row

Sealed with lube holes and grooves

Advanced AeroCres<sup>®</sup> materials available

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· Heavy duty cross sections

Cam Followers

• MS approved to AS81935 (formerly MIL-B-81935)

• MS approved to AS39901 (formerly MIL-B-3990)

• MS approved to AS39901 (formerly MIL-B-3990)

Superior lubricants & seals to reduce maintenance

Spherical and rod end designs

Maximum corrosion resistance

- 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" dia
- Nadcap and customer special process approvals including NDT
- 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













