



Alpha Ball Screw
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Design & Manufacturing Capabilities

About Alpha:

Alpha designs and manufactures imperial or metric precision ground ball screws. We also offer repair/remanufacturing services.

Design Engineering Capabilities:

- Dynamic and Static Load Capacity Analysis
- Detailed Hertzian Contact Stress Analysis
- Life prediction
- Maximum Linear or Rotational Speeds
- Detailed Structural and Fatigue Analysis
- 2D Drawings and 3D Models
- Custom Designs

Manufacturing Capabilities:

- Imperial Ball Circle Diameters from 0.5 inch to 12.0 inch
- Metric Ball Circle Diameters from 10 mm to 300 mm
- High Helix or Square Lead (50 x 50)
- Lengths up to 40 feet (12 meters)
- Ground Thread Class to P3 or C1
- Plain Carbon and Stainless Steels
- Industry Standards; ANSI, DIN, ISO, JIS

Repair and Upgrade Services:

- Repair of Ball Screws, Actuators, and Slides/Stages
- Reverse Engineering
- Design Upgrades to improve Life and Performance
- 8 Levels of Ball Screw Repair

Repair Type	Services	Lead Time	Cost (% of New)
Evaluation	Clean, Inspect, Quote	1-2 Days	Free
Level 1	Re-ball, Straighten, Polish	1-3 Days	10-30%
Level 2	Re-grind Ball Nut	2 Weeks	20-40%
Level 3	Re-grind Screw	2 Weeks	30-50%
Level 4	Replace Ball Nut	4 Weeks	40-60%
Level 5	Replace Screw	4 Weeks	40-60%
Level 6	Replace Ball Nut, Re-grind Screw	4 Weeks	50-70%
Level 7	Replace Screw, Re-grind Ball Nut	4 Weeks	50-70%
Level 8	Completely New Ball Screw Assembly	6-8 Weeks	100%

Standard Lead Time: 6-8 Weeks Expedited Lead Time: 3-4 Weeks