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CherryMAX® Rivet CR3212-4-09

CR3212-4-09 is a high-strength, 100° flush head blind rivet from the CherryMAX® series. It features a mechanically locked stem, ensuring secure and tamper-resistant installation in aerospace structures where only one-sided access is available. This size is designed for extended material stack-ups reaching up to 14.3 mm.

Basic Specifications

- Shank Diameter: 1/8 inch (≈0.125 inch)
- Grip Range: 0.501 – 0.562 inch
- Overall Length: 0.625 – 0.645 inch
- Head Diameter: ≈0.229 inch
- Head Height: ≈0.041 inch
- Head Style: 100° flush countersunk.
- Sleeve — Aluminum alloy 5056, anodized or chromate conversion coated
- Mandrel — Alloy steel 8740, cadmium plated
- Standards Compliance: NAS9302B, MS20600, MIL-SPEC (AS), BACR15FR4
- Manufacturer: Cherry Aerospace, USA.

Material Thickness Selection Guidelines

- Recommended for material stack thickness between 12.73 – 14.3 mm
- Use CR3212-4-08 or shorter variants for thinner stack-ups
- Use CR3212-4-10 or longer variants for thicker materials
- Compatible with pneumatic tools: Cherry G27, G747, G704B, or equivalent.

Part Identification and Marking Structure

- CR — CherryMAX series
- 32 — Rivet type
- 12 — 100° flush countersunk head
- 4 — Nominal diameter 1/8 inch
- 09 — Length code for 0.501 – 0.562 inch grip range.

Key Features and Installation Characteristics

- 100° flush head designed for countersunk holes
- Recommended hole diameter: 0.129 – 0.132 inch
- Mechanically locking stem provides audible "click" during setting
- Mandrel is retained within the body after installation
- Allows blind-side installation without backside access.

Coating and Visual Identification Notes

- Sleeve color may vary: gold (chromate) or silver (anodized)
- Mandrel is cadmium plated — silver-gray in appearance
- Common part markings: CR3212-4-09, AF3212-4-09, NAS9302B-4-09
- Always confirm part by number — color alone is not sufficient.

Additional Technical Characteristics**

- Shear Strength: up to 50,000 PSI
- Tensile Strength: up to 75,000 PSI
- Operating Temperature Range: -65°F to +250°F (-54°C to +121°C)
- Minimum Countersink Depth: 0.030 inch
- Head Seat Radius: 0.090 – 0.110 inch
- Installation Air Pressure: 90 psi nominal
- Typical Installation Time: ≤ 1.8 seconds.

Practical Notes from Technician

- Slight pre-set movement is normal
- Hole diameter must be tightly controlled
- Lubricants should not be used
- In composite materials, reduce setting force to avoid delamination
- Always maintain tooling — especially nosepieces
- Minimum operating air pressure: 85 psi
- A "click" sound confirms stem lock engagement
- Stem tail must sit flush with sleeve ± 0.005 inch.

Note: This technical information is based on the official documentation provided by Cherry Aerospace and is intended solely for reference in product selection and specification.