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## CherryMAX® Rivet CR3212-4-02

CR3212-4-02 is a high-strength CherryMAX® rivet with a 100° flush countersunk head, designed for blind installation in critical aerospace assemblies. The mandrel is securely locked in place through a mechanical locking system that creates a visually inspectable “lock”.

### Basic Specifications

- Shank Diameter: 1/8 inch (≈0.125 inch)
- Grip Range: 0.063 – 0.125 inch
- Overall Length: 0.189 – 0.209 inch
- Head Diameter: ≈0.229 inch
- Head Height: ≈0.041 inch
- Head Style: 100° flush countersunk
- Materials: Sleeve — Aluminum alloy 5056; Mandrel — Cadmium-plated steel 8740
- Standards Compliance: NAS9302B, MIL-SPEC, Cherry Aerospace internal specifications
- Manufacturer: Cherry Aerospace, USA.

### Material Thickness Selection Guidelines

- Suitable for material stack thickness between 1.6 to 3.2 mm
- For thickness below 1.6 mm, use CR3212-4-01
- For thickness above 3.2 mm, use CR3212-4-03
- Recommended installation tool: Cherry G27 or equivalent pneumatic riveter.

### Part Identification and Marking Structure

- CR — CherryMAX series (mechanically locked stem)
- 32 — Rivet type (universal series)
- 12 — 100° flush head configuration
- 4 — Nominal shank diameter 1/8 inch
- 02 — Grip range length for 0.063 – 0.125 inch material stack.

## Key Features and Installation Characteristics

- 100° flush head ensures flush surface after installation
- Mandrel diameter: 0.125 inch; hole size: 0.129 – 0.132 inch
- Mechanical lock with audible and tactile feedback ("click")
- Mandrel remains fully retained inside sleeve with no protrusion
- Blind-side installation — access needed from one side only.

## Coating and Visual Identification Notes

- Sleeve finish — chromate over aluminum (golden hue)
- Mandrel finish — cadmium plating, light gray appearance
- Common markings on packaging: CR3212-4-02 or AF3212-4-02.

## Additional Technical Characteristics

- Body Material: Aluminum alloy 5056
- Mandrel Material: Alloy Steel 8740
- Shear Strength: up to 50,000 PSI
- Tensile Strength: up to 75,000 PSI
- Operating Temperature Range: -54°C to +120°C
- Minimum Countersink Depth: 0.030 inch
- Head Seat Radius: 0.090 – 0.110 inch
- Installation Time at 90 psi Air Pressure: ≤ 1.0 second.

## Advantages

- High fatigue resistance due to mechanical locking
- Fully flush finish with no protruding parts
- Can be installed in slightly oval holes and composite materials
- Fully compliant with NAS and MIL aerospace standards
- One-side installation enables use in closed structures.

**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.