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CherryMAX® Rivet CR3212-4-05

CR3212-4-05 is a high-strength, 100° flush head rivet designed for critical aerospace applications. It provides secure, blind-side installation with a mechanically locked stem that remains fully retained within the sleeve after setting.

Basic Specifications

- Shank Diameter: 1/8 inch (≈ 0.125 inch)
- Grip Range: 0.251 – 0.312 inch
- Overall Length: 0.375 – 0.395 inch
- Head Diameter: ≈ 0.229 inch
- Head Height: ≈ 0.041 inch
- Head Style: 100° flush countersunk
- Sleeve — Aluminum alloy 5056
- Mandrel — Steel 8740, cadmium plated
- Standards Compliance: NAS9302B, MIL-SPEC
- Manufacturer: Cherry Aerospace, USA.

Material Thickness Selection Guidelines

- Suitable for material stack thickness between 6.4 and 7.9 mm
- For thinner materials, use CR3212-4-04
- For thicker materials, use CR3212-4-06
- Recommended installation tools: Cherry G27, G747, or equivalent pneumatic riveter.

Part Identification and Marking Structure

- CR — CherryMAX series (mechanically locked stem)
- 32 — Rivet type (universal application)
- 12 — Flush head configuration (100° countersunk)
- 4 — Nominal shank diameter 1/8 inch
- 05 — Length code for grip range 0.251 – 0.312 inch.

Key Features and Installation Characteristics

- 100° flush head allows for fully countersunk installation
- Recommended hole diameter: 0.129 – 0.132 inch
- Mechanically locked stem with both audible and visible confirmation
- Blind-side installation without access to the backside required
- Mandrel remains fully retained within the sleeve, leaving no protrusions.

Coating and Visual Identification Notes

- Sleeve has chromate conversion coating (golden tint)
- Mandrel is cadmium-plated (silver-gray finish)
- Markings may include: CR3212-4-05 or AF3212-4-05.

Additional Technical Characteristics

- Body Material: Aluminum alloy 5056
- Mandrel Material: 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:** ≤ 1.4 seconds.

Practical Notes from an Experienced Technician

- Minor play before setting is normal and acceptable
- Precise hole diameter is critical for proper fit
- Installation tools must be properly maintained
- Minimum air pressure: 85 psi
- An audible “click” indicates successful stem lock
- Stem tail should be flush with sleeve surface within ± 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.