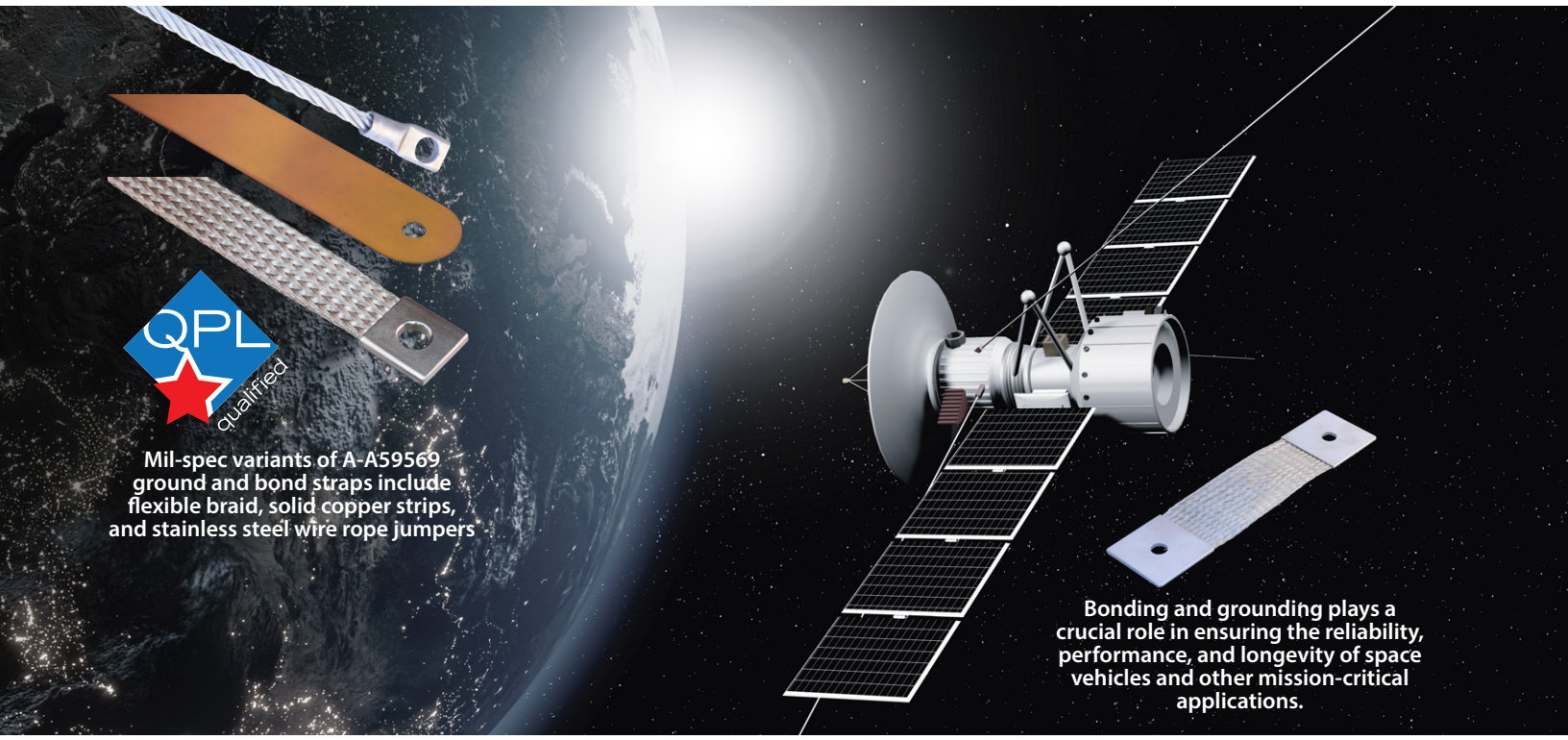
SERIES 107
FLEXIBLE
BRAIDED STRAPS
GROUNDS, BONDS,
AND BUSBARS

LOW-RESISTANCE, FLEXIBLE

A-A-59569 Braided Copper Ground Straps and ESD Bonds

Tin, nickel, and silver-plated copper / stainless steel designs—commercial and mil-spec



Equipotential Bonding: Auxiliary bond straps are used to establish an equipotential bonding network throughout the a satellite, aircraft, or missile system structure. Flexible bonds ensure that all metallic components within the system are electrically connected to each other and to the vehicle's main structure. This helps to prevent potential differences and minimize the risk of electrical arcing or damage due to electrostatic discharge (ESD).

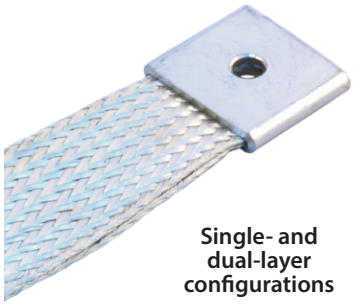
Grounding for Fault Current Dissipation: Ground straps, as compared to bonds, are specifically designed to provide a low-resistance path for fault currents to be safely conducted away from sensitive electronics and subsystems. They serve to dissipate fault currents, transient events, and static discharge to prevent damage and ensure the reliable operation of the satellite's electrical system. Ground straps are sized by the user to safely carry the maximum expected fault current without overheating or sustaining damage.

- **Standard duty and weight** Plated copper and stainless steel ground straps IAW A-A-59569
- **Low-resistance electrical performance** for both grounding and bonding applications
- **Robust current-carrying capacity** IAW military and commercial aerospace requirements
- **Space flight legacy and TRL 9 status** for nickel and silver-plated configurations
- **Outstanding availability:** both catalog and custom solutions routinely stocked in Glenair's same-day inventory

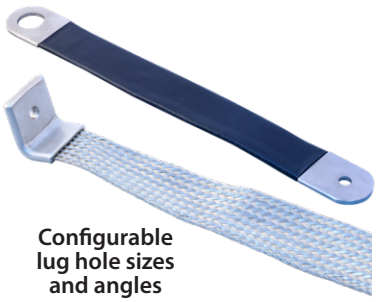
LOW-RESISTANCE, FLEXIBLE

A-A-59569 Soft-Drawn Copper Braid Straps

For Aerospace Bonding and Grounding Applications



Single- and dual-layer configurations



Configurable lug hole sizes and angles

Available with or without M23053 black or clear sleeving

Electrical Structure Network and Metallic Bond Network ground strap material selection depends on electrical resistance, current, and EMI shielding requirements, as well as environmental and regulatory standards. The following configurations of Glenair ground straps built IAW A-A-59569 have been fully tested and qualified.

Conductive and dissipative materials such as copper, are selected for their low resistance while dissipative materials such as steel are selected for their ability to discharge electromagnetic energy in the form of heat. The selection of the correct mix of conductive and dissipative materials for ground straps in aircraft depends on multiple factors including durability, weight and space requirements, as well as galvanic compatibility with other materials. Industry standards also dictate material selection for use in aircraft ground straps.

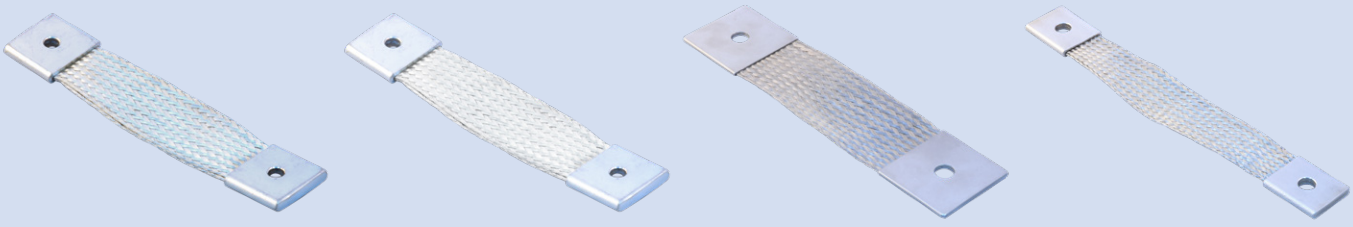
Tin-plated copper material is commonly used in most aerospace applications, and combines the excellent conductivity of copper with the good corrosion resistance of tin plating. This material is not recommended for space applications.

Silver-plated copper may be selected for applications where highest conductivity, excellent resistance to corrosion, and best low-resistance electrical performance are required. This material is recommended for space flight applications as well as non-SWAMP zone aircraft applications.

Nickel-plated copper is selected for excellent conductivity and best corrosion protection of these soft-drawn copper plated braids. This material is recommended for radiation resistance in space flight applications, as well as best corrosion-resistance in SWAMP zone aircraft applications.

Finally, **stainless steel** is the most durable and corrosion-resistant material and should be selected for applications where high strength and resistance to environmental factors such as high heat, moisture, and salt are required. Stainless steel however is not as conductive as any of the copper-core material types, and exhibits higher electrical resistance than may be acceptable for certain bonding and grounding applications.

SELECTION GUIDE: A-A-59569 BRAIDED GROUND STRAPS AND ESD BONDS



107-101
Tin-Plated Copper Braid

107-102
Silver-Plated Copper Braid

107-103
Nickel-Plated Copper Braid

107-104
Stainless SteelBraid