



## Feed-Through Fittings Standard Materials and Notes

The following standard materials are used for the majority of Glenair feed-through fittings and connector accessories. Feed-through components are not limited to those items listed, but are representative of the

elements used in the majority of standard components. Contact Glenair for applicable specifications on items not listed below, or for more information on composite thermoplastic material options.

### STANDARD MATERIALS - FEED-THROUGH FITTINGS

| COMPONENT                                                                                                                                                                                              | MATERIAL                              | SPECIFICATION                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------------------------------|
| Machined components: such as feed-through bodies, strain reliefs, banding platforms, rotatable couplers, mounting plates, lock nuts, G-spring support rings, EMI ground rings, grommet followers, etc. | Aluminum                              | QQ-A-200, 225<br>ASTMB211, 221 |
| Feed-throughs and strain reliefs: available in optional injection molded and/or machined composite thermoplastic.                                                                                      | Engineering thermoplastic such as PEI | AIR 4567<br>MIL-C-85049        |
| Feed-throughs and strain reliefs: available in optional corrosion resisting steel; and hardware such as screws, washers, rivets, band straps, etc.                                                     | Corrosion Resisting Steel             | QQ-S-763<br>(300 Series)       |
| Anti-friction and thrust washers                                                                                                                                                                       | Teflon                                | ZZ-R-765                       |
| Elastomeric seals: such as O-rings, cable jacket seals, grommets, etc.                                                                                                                                 | Silicone                              | TFE                            |
| Anti-rotation device                                                                                                                                                                                   | Corrosion Resistant Material          |                                |

### NOTES

On all length callouts, tolerance is  $\pm .060$  unless otherwise specified.

Unless otherwise specified, the following other dimensional tolerances will apply:

.xx =  $\pm .03$  (0.8)  
 .xxx =  $\pm .015$  (0.4)  
 Lengths =  $\pm .060$  (1.52)  
 Angles =  $\pm 5^\circ$

Metric dimensions (mm) are indicated in parentheses

### GENERAL COMPOSITE CHARACTERISTICS

- 24 KPSI - 38 KPSI Tensile Strength
  - 33 KPSI - 54 KPSI Flexural Strength
  - 1,300 KPSI - 2,100 KPSI Flexural Modulus
  - 175 - 200° Celsius Operating Temperature
  - CTE, Composite: @ 10<sup>5</sup> inch/inch °F is 1.10 - 1.40
  - Meets ASTM-E-595, NASA SP-R-0022A Outgassing Requirements for Space
- Contact factory for specific data.

## Feed-Through Fittings Standard Materials and Finishes Table



**TABLE II - STANDARD MATERIALS AND FINISHES**

| FINISH    | ALUMINUM ALLOY (I.A.W. QQ-A-225)*                                                                                                                                              |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NF</b> | Cadmium Plate, Olive Drab per QQ-P-416, Type II, Class 3 over Electroless Nickel Plate per MIL-C-26074 Class 3 or 4, .0005 Minimum Thickness. 1,000 hrs. Corrosion Resistance. |
| <b>ZN</b> | Zinc Alloy Plate per ASTM B 841-91, Class 1, Type E, Grade 3, over Electroless Nickel Plate per ASTM B 733-90 SC2, Type 1, Class 5, Olive Drab.                                |
| <b>GB</b> | Hard Coat, Anodic, Color Black, MIL-A-8625, Type III, Class 1 (Not suitable for EMI shielding or grounding).                                                                   |
| <b>MT</b> | Nickel Plate with PTFE, Gray, 1,000 Hour Salt Spray                                                                                                                            |
| <b>TZ</b> | Tin-Zinc, Green/Gold, 1,000 Hour Salt Spray, Cadmium Compatible.                                                                                                               |
| FINISH    | STAINLESS STEEL (300 Series Cres I.A.W. QQ-S-763)                                                                                                                              |
| <b>Z1</b> | Passivate per QQ-P-35. Applicable to corrosion-resisting steel backshells and accessories.                                                                                     |
| <b>ZM</b> | Electroless Nickel Plate per MIL-C-26074, Class 30R4, Grade A.                                                                                                                 |
| <b>MS</b> | Electroless Nickel, Matte Finish                                                                                                                                               |
| FINISH    | TITANIUM                                                                                                                                                                       |
| <b>TP</b> | Electroless Nickel                                                                                                                                                             |
| FINISH    | HIGH-GRADE ENGINEERING THERMOPLASTIC COMPOSITE                                                                                                                                 |
| <b>XB</b> | Nickel Plate, Thermoplastic Composite Material (Non-Conductive).                                                                                                               |
| <b>XO</b> | No Plating, Black Thermoplastic Composite Material (Non-Conductive).                                                                                                           |
| <b>XM</b> | Electroless Nickel Plate, 1,000 hrs. Corrosion Resistance.                                                                                                                     |
| <b>XW</b> | Cadmium Plate, Olive Drab over Electroless Nickel. 1,000 hrs. Corrosion Resistance.                                                                                            |

\* Aluminum components are not recommended for above-deck (weather-deck) shipboard use. Glenair's CostSaver Composite EMI/RFI Junction Boxes should not be paired with aluminum feed-through fittings when used in exposed, harsh-weather environments. Despite protective platings, aluminum interconnect components corrode too quickly when exposed to salt spray or other corrosive liquids to be useful in these settings.