Qwik Connect

GLENAIR - JULY 2008 - VOLUME 12 - NUMBER 3

Series 79 Micro-Crimp Connectors

Crimp Contact Convenience in a Micro-D Shell

Plus...

The Evolution of Aerospace Quality Assurance Systems

QwikConnect

Crimp-and-Poke Comes to the MIL-DTL-83513 Micro-D Connector

ttaching wires to contacts with solder is a standard practice in the interconnect industry. Solder termination has several advantages, including that it can be accomplished without the use of highly-specialized tools. But solder terminations are difficult to perform in the field when a connector requires modification or repair. Likewise, connectors equipped with pre-terminated wire pigtails—typically molded in place or potted at the factory with a plastic sealant—are challenging to work with in applications where field repairability and ease-of-assembly are required.

For these reasons, crimp style contacts (which marry the conductor to the contact with controlled compression applied with a specialized crimp tool and die) are preferred in many military, aerospace, industrial and rail applications.

Crimp contacts, which can be inserted and removed multiple times from the connector, allow for contact replacement or circuit changes with little difficulty compared to solder or mold-in-place contacts.

Military standard type connectors, such as the ubiquitous D38999, utilize a four indent crimp contact termination system which affords uniform displacement of both the wire conductor and the contact material. Upon completion, the wire strands and contact material are formed together in a solid mass with a minimum of voids and little or no extrusion of the wire strands.

In a well performed crimp joint, the metal flow of the malleable gold-plated copper contact and the copper wire conductor essentially form a cold weld. The mechanical strength of the cold weld joint is outstanding, as is its electrical continuity. In pull tests, the wire conductor will separate long before the wire would pull away from the crimp joint.

Because of the different environments in which electrical connectors are deployed, there are situations in which solder and/or pigtail assemblies are perfectly acceptable or are in fact preferred over crimp. Glenair's MIL-DTL-83513 qualified connector series is a perfect example. In fact, this TwistPin equipped Micro-D is the preferred interconnect in missile systems and other miniaturized applications that do not require the versatility of a crimp contact system.

These are typically "install and forget" applications that are not subject to repeated mating cycles or postproduction modifications.

But other applications, for example modular avionic systems, are more suited to crimp contact systems. But unfortunately, there have been few good

choices when it comes to rectangular, D-shaped connectors used in miniaturized rack-andpanel or module-to-chassis applications. Until Now!

QwikConnect is proud to introduce a versatile new crimp-contact connector series: the Series 79 Micro-Crimp from Glenair is the perfect choice for applications which require the convenience of a hybrid crimp contact system in a Micro-D Subminiature package. The following pages present a short overview of the "Micro-Crimp" including connector architecture, accessories, and layouts. For ordering information and other product details, a "sneak-peak" of the new draft catalog has been posted at www.glenair.com. The Series 79 connector is available now and ready for deployment in rugged applications that require small size and weight, environmental sealing, improved shielding and, most importantly, the convenience of industry-standard crimp-and-poke signal, power and coax contacts.



oday's defense/aerospace systems require advanced levels of environmental protection, electromagnetic shielding and size/weight reduction. The Series 79 Micro-Crimp connector was created to meet the need for environmental sealing, improved shielding, and reduced size/weight. Available in a wide range of insert arrangements, the Micro-Crimp offers size #12, #16 and #23 contacts. Snap-in rear release signal, power and coaxial contacts meet the requirements of SAE AS39029. Printed circuit board versions complete the product range.



Plug With Socket Contacts



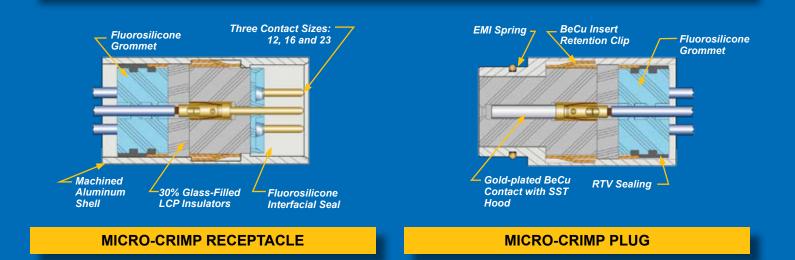
Receptacle With Pin Contacts

Crimp, Rear-Release AS39029 type contacts in size #12, #16 and #23. 360° EMI Spring

Innovative spring assures excellent shielding performance.

Environmentally Sealed

Fluid-resistant gaskets and seals provide IP67 ingress protection.





Series 79 Micro-Crimp Options and Accessories

EMI ADAPTERS

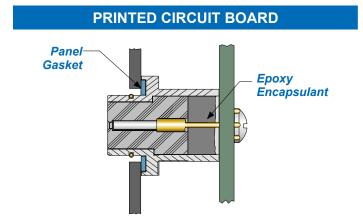


Lightweight, low profile shielding adapters allow direct attachment of cable shields for excellent EMI performance. These two-piece adapters lock into a groove on the connector body.

PNEUMATIC CONTACTS



Used for pitot tube sensors on aircraft, these stainless steel pneumatic contacts are airtight up to 100 p.s.i. Fits size #12 contact cavities.



BLIND MATE CONNECTORS



Micro-Crimp panel mount connectors are ideal for module-to-chassis packaging. Stainless steel guide pins assure connector alignment for blind mate applications. Float bushings are also available.

EMI SPRING



The EMI springs utilized on Glenair Micro-Crimp plug connectors provide 360° of contact with the mating connector. The closely spaced spring coils reduce EMI apertures to a minimum.



Panel mount Micro-Crimp connectors are furnished with gaskets made from Chomerics CHO-SEAL 1287 fluorosilicone filled with silver-plated aluminum for low resistivity and excellent resistance to avionics fluids.

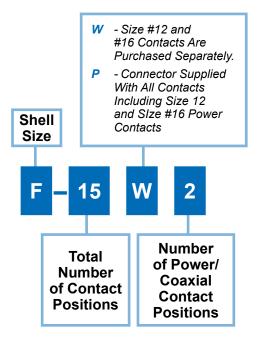


SERIES 79 MICRO-CRIMP INSERT ARRANGEMENTS							
Shell Size	Insert Arr.	No. of Contacts and Contact Size	Mating Face Pin Connector				
A	A-5	5 #23 CONTACTS					
В	B-2P2 B-2W2	2 #16 CONTACTS					
В	B-9	9 #23 CONTACTS					
С	C-13	13 #23 CONTACTS					
D	D-15	15 #23 CONTACTS					
D	D-3P3 D-3W3	3 #16 CONTACTS					
D	D-7P2 D-7W2	5 #23 CONTACTS 2 #16 CONTACTS					
E	E-11P2 E-11W2	9 #23 CONTACTS 2 #16 CONTACTS					
Е	E-19	19 #23 CONTACTS	$ \begin{array}{c} 1 \\ 0 \\ 2 \\ 0 \\ 0 \\ 1 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$				
E	E-7P3	4 #23 CONTACTS 3 #16 CONTACTS	$ \begin{array}{c c} 1 & A1 & A2 & A3 & \bullet 2 \\ \hline 3 & \bullet & \bullet & \bullet & \bullet & \bullet \\ 3 & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \end{array} $				
F	F-15P2 F-15W2	13 #23 CONTACTS 2 #16 CONTACTS	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$				
F	F-23	23 #23 CONTACTS	$\begin{array}{c} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 \\ \hline 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 \\ \hline 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 0 & 0 & 0 & 0 \\ \hline 1 & 1 & 1 & 1 & 1 & 10 & 0 & 0 & 0 & 0 $				
F	F-5P5 F-5W5	5 #16 CONTACTS					
G	G-33	33 #23 CONTACTS	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$				



SERIES 79 MICRO-CRIMP INSERT ARRANGEMENTS							
Shell Size	Insert Arr.	No. of Contacts and Contact Size	Mating Face Pin Connector				
Н	H-10P4 H-10W4	6 #23 CONTACTS 4 #12 CONTACTS	$ \begin{array}{c c} A1 & A2 & 1 & 2 \\ \hline & & & & & \\ \hline & & & & & \\ \hline & & & &$				
Н	H-29P7	22 #23 CONTACTS 7 #16 CONTACTS	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				
н	H-36P2 H-36W2	34 #23 CONTACTS 2 #12 CONTACTS	$ \underbrace{ \begin{array}{c} A_{1} \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $				
Н	H-54P2 H-54W2	52 #23 CONTACTS 2 #16 CONTACTS	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				
н	H-5P5 H-5W5	5 #12 CONTACTS	$\left(\begin{array}{c} A_{1} \\ \\ \end{array} \\ A_{2} \\ \\ \end{array} \\ A_{3} \\ \\ \end{array} \\ A_{4} \\ \\ \end{array} \\ A_{5} \\ \\ \end{array} \right)$				
н	H-66	66 #23 CONTACTS	$1 \xrightarrow{2} 3 \xrightarrow{4} 5 \xrightarrow{6} 6 \xrightarrow{7} 8 \xrightarrow{3} 3 \xrightarrow{10} 11 \xrightarrow{12} 3 \xrightarrow{14} 5 \xrightarrow{16} 6 \xrightarrow{33} 33$ $17 \xrightarrow{6} 6 \xrightarrow{6} 6 \xrightarrow{7} 8 \xrightarrow{3} 3 \xrightarrow{10} 11 \xrightarrow{12} 3 \xrightarrow{14} 5 \xrightarrow{16} 6 \xrightarrow{33} 33$ $34 \xrightarrow{6} 6 $				
J	J-17P4 J-17W4	13 #23 CONTACTS 4 #16 CONTACTS	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$				
J	J-25P2 J-25W2	23 #23 CONTACTS 2 #16 CONTACTS	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				
J	J-33	33 #23 CONTACTS	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				

SERIES 79 MICRO-CRIMP INSERT ARRANGEMENTS								
Shell Size	Insert Arr.	No. of Contacts and Contact Size	Mating Face Pin Connector					
J	J-7P7 J-7W7	7 #16 CONTACTS	A1 A2 A3 A4 A5 A6 A7					
к	K-27P4 K-27W4	23 #23 CONTACTS 4 #16 CONTACTS	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$					
к	K-35P2 K-35W2	33 #23 CONTACTS 2 #16 CONTACTS	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$					
к	K-43	43 #23 CONTACTS	$\begin{array}{c}1 \\ 0 \\ 2 \\ 3 \\ 2 \\ 3 \\ 2 \\ 4 \\ 2 \\ 5 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2$					
к	K-9P9 K-9W9	9 #16 CONTACTS	A1 A2 A3 A4 A5 A6 A7 A8 A9					
L	L-6P6 L-6W6	6 #12 CONTACTS	$\left(\begin{array}{c} A_{1} \\ \\ \end{array} \\ A_{2} \\ \end{array} \\ A_{3} \\ \end{array} \\ A_{4} \\ \end{array} \\ A_{5} \\ \end{array} \\ A_{6} \\ \end{array} \\ A_{6} \\ \end{array} \right)$					



Insert Arrangements Explained

The first letter represents the shell size. The number following the shell size represents the total number of contacts. If the insert arrangement is a mixed layout with signal contacts and coaxial/power contacts, the letter "W" specifies the connector to be furnished with signal contacts only (coax/ power contacts purchased separately), and the letter "P" specifies the connector to be furnished with both signal and power contacts. For complete order information, please visit www.glenair.com.



Guaranteed to Please:

Recently a US-based company presented a Japanese manufacturer with a new quality assurance requirement for one of their highvolume products. In the purchase order, the customer specified they will accept three defective parts per 10,000. Dutifully, the Japanese supplier produced and shipped 10,000 good parts-and in a separate delivery sent the customer three bad ones.

The Quotable Groucho Marx:

Outside of a dog, a book is man's best friend. Inside of a dog, it's too dark to read.

Time flies like an arrow. Fruit flies like a banana.

The secret of life is honesty and fair dealing. If you can fake that, you've got it made.

Those are my principles. If you don't like them I have others.





Use the QwikCross clues to find an answer for all the blank squares. Unlike a normal crossword, your only clue to where the answers go is their number of letters — and your knowledge of Glenair Products!

2 Letter Answers:

- Picofarad (abbr.)
- Gold
- 3 Letter Answers:
- Workplace debris
- Mates with socket

4 Letter Answers:

- Mighty's cousin
- Pico's big brother
- Rowen Atkinson character - Polyteterafluoroethylene

5 Letter Answers:

- Circular seal
- Clamp, as in Voltage
- Raychem staples
- Aeronautical Radio, Inc.
- 6 Letter Answer:
- Don't blow one (slang)
- 7 Letter Answers:
- Lots of stops
- Spiral
- Peanut band - Backshell giant

8 Letter Answers:

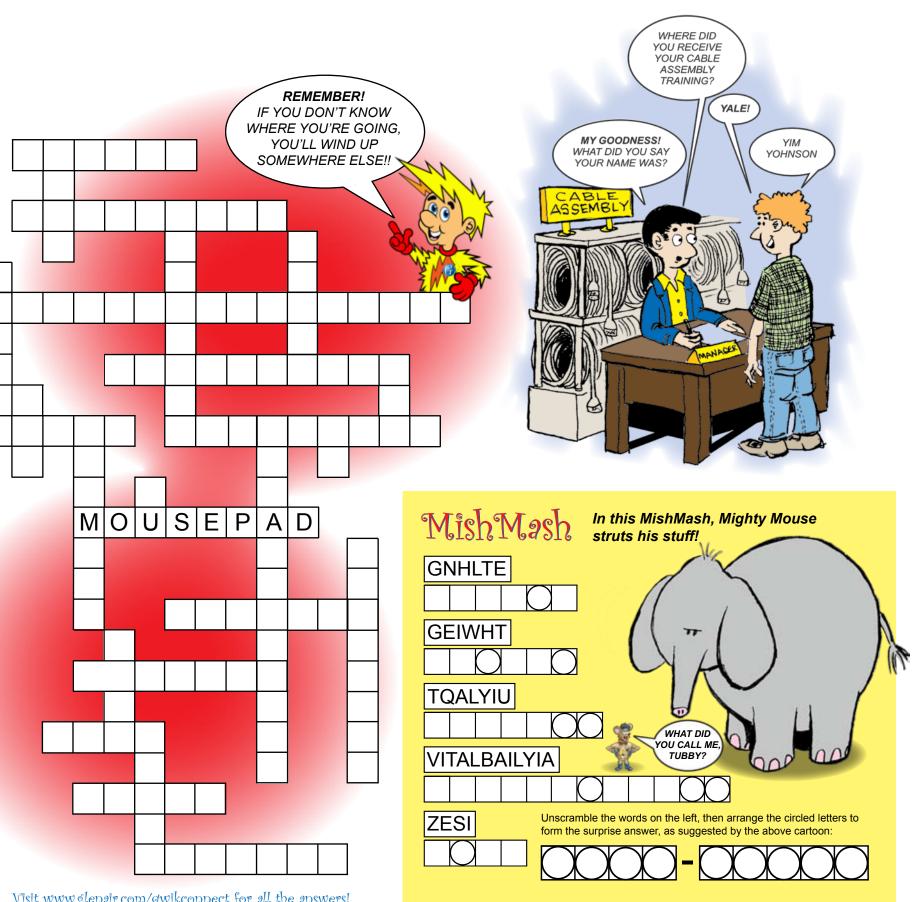
- RJ-45 domain
- Where "Mighty" lives
- My friends call me "Serge"

9 Letter Answers:

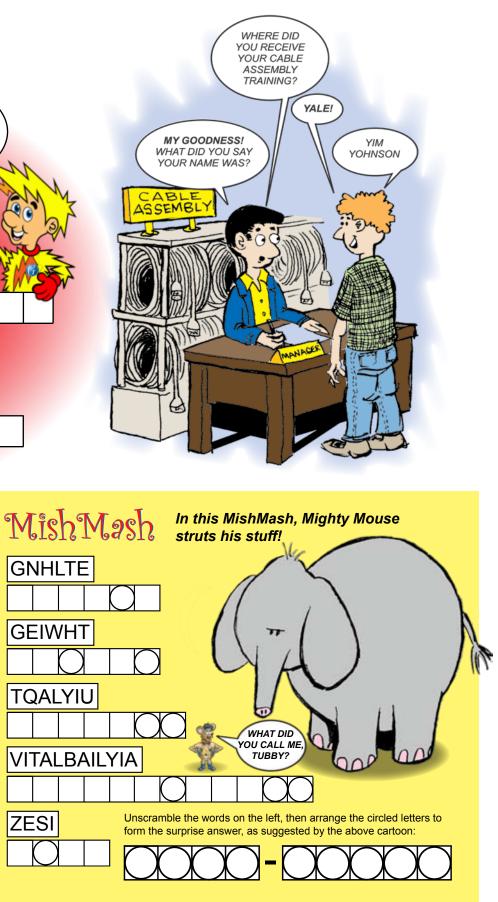
- Cabezas by the pound
- They're in the plug in Micros

10 Letter Answer:

- Underground warning
- 12 Letter Answer:
- Tension tamer
- 16 Letter Answer:
- Fleeting current



Visit www.glenair.com/qwikconnect for all the answers!





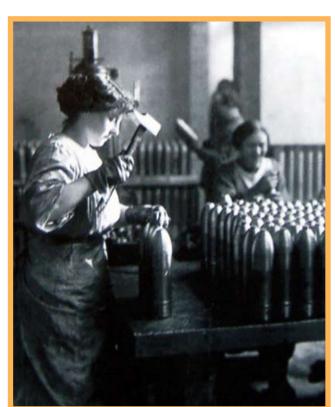
The Evolution of Aerospace Industry Quality Assurance Systems

ritish munitions manufacturers during World War II found that bombs would sometimes explode in factories during assembly, so they adopted procedures to ensure production guality and reduce the risk of mishaps. Factories were required to document manufacturing procedures and keep records as proof that procedures were being followed. These procedures were eventually compiled into what became known as British Standard 5750 (BS 5750).

Over forty years later in 1987, the British Government persuaded

the International Organization for Standardization (ISO) to adopt BS 5750 as an international standard that became ISO 9000. Over time, revisions to ISO 9000 resulted in quality standards for design, development, installation and servicing. In-process quality requirements spurred development of preventative actions, as opposed to previous models that focused only on evaluating the final product. US defense standards such as MIL SPECS, NATO specifications and NASA standards also influenced the evolution of ISO 9000. In these early years, ISO 9000 was implemented exclusively by large companies. But by the mid-1990s, small and midsized companies began to adopt the standard.

In 2000, the ISO combined all ISO 9000 revisions into one new standard—ISO 9001. The 2000 version further emphasized process management and specified additional involvement by upper-level managers and executives to better



integrate quality into business systems and avoid delegation of quality functions solely to junior administrators.

Parallel to the rise of ISO 9000 and 9001. numerous companies within the aerospace industry were establishing their own quality standards, often in isolation from one another. The resulting patchwork of competing requirements was sometimes maddening to suppliers charged with compliance, as each OEM required a dizzying array of unique documentation, auditing and reporting procedures.

In 1996, SAE

Aerospace Resource Document (ARD) 9000 emerged from a working group of US aerospace prime contractors, including Allied-Signal, Allison Engine Company, Boeing, General Electric Aircraft Engines, Lockheed Martin. McDonnell Douglas, Northrop Grumman, Pratt Whitney, Rockwell Collins, Sikorsky Aircraft, and Hamilton Sundstrand. About a year later, SAE International's American Aerospace Quality Group (AAQG) published AS 9000: Aerospace Basic Quality System Standard.

A major revision in 2000 tied the new AS 9100 closely to ISO 9001, with additional requirements unique to the aerospace industry. AS 9100 has now been universally accepted by aerospace OEM's worldwide, and the Federal Aviation Administration has recognized AS 9100 as a comprehensive quality standard that meets federal regulations, giving suppliers renewed confidence in ISO style systems.

Glenair Quality Policy and Objectives

Glenair is committed to the high quality standards exemplified in AS 9100 and ISO 9001. One of the most important actions taken by Glenair in the process of certifying to AS 9100 and ISO 9001 was to refine our quality policy and objectives in a meaningful way. Our Quality Policy is as follows:

"Glenair Quality Depends on Me" is a maxim used by all employees to encourage us to meet or exceed customer expectations in our daily work activities. We continually strive to enhance our quality management system in support of our commitment towards exceptional quality products, superior delivery, and customer satisfaction.

The quality policy and objectives are communicated to all employees throughout the organization and posted as a reminder to actively look for ways to improve product quality.

Quality Objectives:

Glenair quality objectives are considered "KEY Performance Indicators" to the overall organization in evaluating the effectiveness of the quality management system and the processes employed to meet the stated requirements and performance objectives, both internally and externally. Listed below are the established quality objectives at Glenair:

Customer Satisfaction:

Monitor and Measure Customer Perception.

Delivery:

Maximize On-Time Delivery Performance.

Quality:

- Reduce the Number of Internal Rejects.
- Reduce the Number of RMA's.
- Improve Supplier Performance.

These quality objectives are subject to change as a result of continuous improvement activities and efforts, historical data that shows acceptable process and quality capabilities are within the stated criteria, and opportunities identified to improve the effectiveness of the quality management system.

Product Testing Capabilities

Glenair has extensive product testing capabilities and facilities. In our Glendale factory we have testing and diagnostic equipment including thermal cycling ovens, thermal shock ovens, voltage conditioners, helium leak detectors, dielectric withstanding voltage devices, insertion loss evaluators, borescopes and other optical performance analyzers, x-ray machine, diode burn-in

systems, and network analyzers. Additionally, Glenair maintains ongoing relationships with a number of local and national DSCCand NAVAIR-approved full service testing laboratories.



Glenair UK Ltd in Mansfield, England,

operates one of the most extensive testing laboratories in the interconnect industry. The facility is approved to perform salt water immersion, corrosion, shock, vibration, pull and the complete range of other performance tests required for discrete interconnect components and harnesses. The facility is equipped with dynamic shakers, environmental chambers, force and displacement equipment, and a complete range of electrical continuity measurement devices, gauges and meters.

Our power products group in Bologna, Italy also boasts a complete laboratory for electrical, mechanical and environmental testing, including a comprehensive array of computer controlled and automated inspection and test systems.



The Quality Results Are In!

Glenair's Quality Assurance Group keeps careful track of the data we receive from the OEM customers who provide us with feedback on product quality and delivery. Some recent ratings and comments from key customers include:

- One of the world's largest airframe manufacturers found our quality rating, based on "acceptances" (non-rejected parts) versus parts delivered, was 99.97% and our on-time delivery rating was 99.24%. This rating took into account twelve of this OEM"s domestic shipping locations.
- A major systems integrator and prime contractor on defense programs rated our ontime delivery at 99.76%.
- A market leader in business aviation; land and expeditionary combat vehicles and systems, armaments, and munitions; shipbuilding and marine systems; and mission-critical information systems and technologies rated our quality and on time delivery at 100% and noted our "excellent performance."
- One of the largest defense companies in the United States and a prime defense contractor in Intelligence, Surveillance and Reconnaissance (ISR), secure communications, government services, training and simulation and aircraft modernization and maintenance, gave Glenair a composite rating of 105%, extra credit, as it were, because our acceptance and delivery ratings were both 100%.
- A major global defense and technology company that provides solutions in information and services, electronics, aerospace and shipbuilding to government and commercial customers worldwide rates our quality at 99.35% and delivery at 98.90%.
- A smaller company that makes custom EMI/RFI filters rates Glenair's overall quality and delivery performance at 100%.
- Another smaller company—a premier global supplier of custom engineered products sold to the aerospace and defense industries gives Glenair an "A" based on 100% performance in quality and delivery.

VG Qualified Parts

The German Federal Office of Defense Technology and Procurement (BWB) establishes procurement standards for defense items not covered by commercial specifications. VG standards are established by the Deutsches Institut für Normung (DIN). These standards are widely used in European and North American defense programs. Like their U.S. military specification counterparts, these VG specs require rigorous qualification testing in order to guarantee performance and interchangeability. Glenair is qualified on the following VG specifications:

VG 95234—MS 5015 reverse bayonet connectors VG 95351—Audio miniature connectors VG 95328—Versions of MIL-C-26482 connectors VG 96929—Unipolar high current connectors VG 96934—Audio miniature connectors



Ongoing third party certification to AS9100: 2004 Rev B and ISO 9001: 2000 allows customers to forego their own costly and time-consuming audits of Glenair's quality assurance system.

THE EADTRADY OF MITTATEA SAMADYBDS

Inited States Defense Standards, often called "Military Standards," "MIL-STD", or "MIL-SPEC," evolved to achieve standardization necessary for interoperability, commonality and reliability. In World War II, for example, American screws and bolts did not fit British equipment.

Essentially everything used within the military has been subjected to standardization and specification—by 1990, nearly 30,000 standards existed. This proliferation eventually imposed unnecessary restrictions, increased cost to contractors and impeded incorporation of new technology. Secretary of Defense William Perry issued a memorandum in 1994 that curtailed further standards proliferation. Known as the "Perry Memo," the advisory resulted in cancellation of many military standards and a shift to the use of industry standards, such as AS85049 for backshells and accessories and ISO 9000 / AS 9000 for quality assurance. Simultaneously, the Defense Department moved away from the traditional exhaustively descriptive MIL-SPECs to embrace less detailed "performance specifications" that describe desired performance features of the product. These new MIL-PRFs tend to leave design and materials choices to the manufacturer, as long as performance criteria are met.

Manufacturers must design, build and test sample MIL-SPEC controlled parts to prove conformance to the MIL-SPEC. Following review of test samples and results, Defense Supply Center Columbus (DSCC), NAVAIR, and other military logistics agencies determine if qualification criteria are met. Successful manufacturers are then placed on lists as qualified vendors for specific part numbers covered within the MIL-SPEC.

MIL-QUALIFI	ED PRODUCTS C	URRENTLY AV	AILABLE FROM	I GLENAIR.
AS85049	M83723/	thru MS20048	MS27507	MS3181
D38999/21	M83723/15	MS24264	MS27508	MS3184
D38999/22	M83723/16	thru MS24266	MS27510	MS3186
D38999/23	M83723/27	MS24295	MS27511	MS3188
D38999/25	M83723/35	MS25042	MS27512	MS3189
D38999/27	M83723/44	MS25043	MS27513	MS3410
D38999/28	M83723/46	MS27291	MS27557	MS3416
D38999/32	M83723/50	thru MS27297	MS27558	MS3417
D38999/33	M83723/59	MS27342-2	MS27559	MS3418
D38999/41	M83723/60	MS27352	MS27656	MS3419
D38999/43	M83723/61	MS27353	MS27688	MS3420
D38999/45	M83723/70	MS27466	thru MS27670	MS3437
D38999/48	M83723/79	thru MS27478	MS27741	MS3440H
D38999/50	M83723/80	MS27470	MS3057	MS3442H
M38999/	M83723/81	MS27471	MS3105	MS3443H
M24308/9	M83723/88	MS27475	MS3113H	MS3449H
M24758/	M83723/89	MS27476	MS3114H	MS3450
M26482/1 and /2	M83723/90	MS27477	MS3115	thru MS3459
M28840/	M83723/93	MS27478	MS3142H	MS3470
M29504/4	M83723/94	MS27496	MS3143H	thru MS3476
M39029/	M83733/15	MS27497	MS3152	MS3473N
M55302/	M85049/	MS27499	MS3153	MS3477N
M81511/13thru/19	M85528/1 thru /3	MS27501	MS3154	MS3479N
M81659/	MS17349/	MS27502	MS3158	MS3480
M81714/	MS17350/	MS27505	MS3161	MS3481
M83513/	MS20047	MS27506	MS3180	MS3482

QwikConnect

Calibration



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The Glenair Calibration System tracks over 5,600 separate instruments ("assets," as they're known in AS 9100) including nearly 4,000 gages

and over 600 in-process verification and inspection stamps. Assets also include ring and plug thread gages, calipers, micrometers, scales, temperature controllers, chart recorders, dewpoint meters, and multimeters. Using a sophisticated digital tracking system, each instrument is called back for calibration at least annually, and calipers used in our machine shops are calibrated twice per year.

The Glenair calibration system takes a lot of detailed administrative effort, and considerable footwork, to track, retrieve and deliver assets due for calibration. But it's well worth the effort to make sure our customers receive products that meet their exacting specifications.

Nadcap Plating Certification

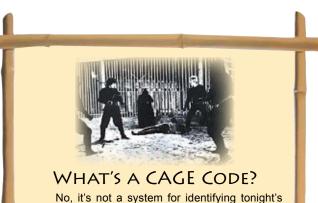
Nadcap (formerly NADCAP, the National Aerospace and Defense Contractors Accreditation Program) is a global cooperative standards-setting program for aerospace engineering, defense and related industries. Nadcap is now part of Performance Review Institute (PRI), created in 1990 by the Society of Automotive Engineers (SAE) Glenair's plating operations are accredited under Nadcap for:

- Processor Basic Quality System
- Process Solution Control and Chemical Testing
- Chemical Processing for:
 - Alloy Plating—AMS 2417
 - Anodizing—MIL-A-8625
 - Cadmium Plating—AMS 2400
 - Cadmium Plating—QQ-P-416
 - Conversion/Phosphate Coatings—MIL-C-5541
 - Copper Plating—AMS 2418
 - Copper Plating—MIL-C-14550
 - Electroless Plating Nickel—MIL-C-26074
 - Gold Plating—AMS 2422
 - Gold Plating—MIL-G-45204
 - Nickel Plating—QQ-N-290
 - Silver Plating—Other
 - Silver Plating—QQ-S-365
 - Surface Treatment/Passivation—QQ-P-35
 - Tin Plating—ASTM B 545
 - Tin Plating—MIL-T-10727
 - Zinc Plating—Other

QwikConnect readers will be happy to learn that in addition to the chemical processes listed above Glenair also offers two new environmentallyfriendly plating finishes, Nickel-Fluorocarbon Polymer (MT) and Zinc-Nickel (ZN). Both conductive surface finishes provide outstanding mechanical, electrical and environmental performance and are cadmium and hexavalent chromium free. These RoHS compliant surface finishes are available for all environmentalclass connectors and accessories.



This Nadcap certified "green" plating line delivers RoHS compliant surface coatings for our Power Products Division.



No, it's not a system for identifying tonight's Ultimate Fighting Championship combatants in the Octagon.

Instead, it's a five digit code that identifies contractors doing business with the Federal Government, NATO member nations, and other governments.

The Commercial and Government Entity (CAGE) code is used to support a variety of mechanized systems throughout the U.S. government and provides for a standardized method of identifying a given facility at a specific location. For example, you'll see Glenair's CAGE code (06324) marked on every part we make and every page in each catalog we print. The Defense Logistics Information Service (DLIS) assigns and maintains the CAGE Code Master File.



A Quality Celebration

ast year I was watching what turned out to be the final game of baseball's World Series, in which the Boston Red Sox swept the Colorado Rockies in just four games. I was somewhere where I could view a big television screen, but not hear any sound—I might have been in a pub. As the final out was made, the Red Sox erupted into a wild celebration, with the players who had been in the dugout rushing out to join those already on the field, hugging, jumping up and down, shouting, etc.

Perhaps because the sound was inaudible to me, I noticed something I had missed the many times I had witnessed this kind of scene: that these various groupings of celebrating players had a quicksilver, amorphous nature. Instead of remaining constant, they were continuously dissolving, and reforming again. Groups of small, medium or large numbers of players would form, hug, jump up and down, then dissolve and re-form into different configurations altogether. This was going on all over the place—a spontaneous, real world example of a group celebration.

At that moment in time it seemed to me that all the "me, me, me" that we often associate with professional athletes was gone, replaced by the euphoric "we, we, we" of a team that, together, had pulled off a really tough assignment. In my view, that moment of group celebration was far more significant than all of the individual successes—the clutch base hits, stolen bases, walk-off home runs, etc.—I had witnessed as a fan over the entire season. I have no doubt that the players on the field felt the same way: that the celebration they shared that day as a team far outweighed any of the others they had enjoyed that year as individuals.

Which brings me to the team success of undertaking and achieving AS 9100: 2004 Rev. B and ISO 9001: 2000 certification. This endeavor was one long, hard slog. And there were plenty of individual tasks to go around to get the job done. But when it was all finished, and we had passed the numerous audits and verifications, we took time out from our busy schedules to celebrate as a group and it was a pretty special moment. There certainly wasn't as much jumping up and down and high-fiving as at a sports championship, but there was plenty of heartfelt camaraderie and group pride in a job well done. And that's the way it ought to be. Will Rogers had it exactly right, "There ain't nothing better than old friends getting together and talking about old times...It's great to be great, but it's better to be human."

Thris Tormey

Christopher J. Toomey President



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