

Meeting AS9100, ISO 9001, and ITAR Requirements in Power Distribution Components: What Busbar Procurement Teams Need to Know

Why these standards matter for busbars

Power distribution components in aerospace and defense programs must demonstrate consistent quality, traceability, and controlled handling of sensitive data and hardware. AS9100, ISO 9001, and ITAR work together as the backbone of that control, especially when busbars end up in flight critical or defense applications.



AS9100 essentials for busbar suppliers

AS9100 is the aerospace quality management standard built on ISO 9001 with additional aviation, space, and defense requirements.

For busbar procurement, key AS9100 elements to confirm are:

- **Product safety focus**
AS9100 requires processes that specifically address product safety, including design controls, risk assessment, and preventive actions for critical components.
- **Risk and configuration management**
Suppliers must identify risks in design and manufacturing, maintain configuration control on drawings and revisions, and ensure only the correct revision is built and shipped.
- **Control of special processes and suppliers**
The standard expects robust control of special processes (e.g., plating, bonding, soldering) and formal oversight of sub tier suppliers and outsourced services.
- **Counterfeit parts prevention**
AS9100 includes requirements to prevent counterfeit or suspect parts, which is critical when busbars integrate hardware like fasteners, terminals, or embedded components.
- **Documented inspection and traceability**
There must be records of inspection, test, and nonconformance, and traceability back to materials, processes, and lot numbers where required.

For procurement teams, an AS9100-certified busbar supplier significantly reduces risk that a component will fail quality audits at the OEM or prime level.

ISO 9001: foundation of consistent quality

ISO 9001 defines the general framework for a quality management system (QMS), and AS9100 incorporates all of ISO 9001's requirements.

Important ISO 9001 aspects to verify with a busbar manufacturer include:

Process-based QMS

The supplier should operate a structured process approach—defined inputs, controlled processes, and verified outputs—for quoting, engineering, fabrication, inspection, and delivery.

Corrective action and continuous improvement

ISO 9001 requires documented handling of nonconforming product, root cause analysis, and corrections to prevent recurrence.

Internal audits and management review

Regular internal audits, data analysis, customer satisfaction monitoring, and top-management reviews must be part of the system to keep performance improving.

Control of externally provided processes

Suppliers must manage and qualify their own vendors (e.g., plating houses, insulators, raw copper or aluminum mills) to ensure conformity to requirements.

When a busbar manufacturer is both ISO 9001 and AS9100 certified, procurement teams gain confidence that quality is embedded from order entry through shipment.

ITAR: protecting controlled technical data and hardware

ITAR (International Traffic in Arms Regulations) governs the export and handling of defense articles and related technical data listed on the U.S. Munitions List. Some sensitive non-military exports may also be controlled under EAR (Export Administration Regulations) by the U.S. Department of Commerce.

For power distribution components used in defense platforms, procurement teams should focus on whether the busbar supplier:

Is ITAR registered (when applicable)

Manufacturers of USML defense articles or related technical data must register with the U.S. State Department's Directorate of Defense Trade Controls (DDTC).

Restricts access to U.S. persons where required

ITAR-controlled technical data (prints, 3D models, BOMs, specifications) must be accessible only to U.S. persons unless specific export authorizations exist.

Uses documented ITAR compliance programs

A formal compliance program should cover classification of parts, secure data handling, training, incident response, and documentation.

Controls exports and offshore activities

Any offshoring of fabrication or sharing of technical data with foreign persons requires the appropriate licenses or agreements.

If busbars are destined for defense programs, choosing a non ITAR compliant supplier can create serious schedule, legal, and contract risks downstream.

What procurement staff should verify in busbar RFQs

When sourcing busbars for aerospace and defense power distribution, procurement teams can improve outcomes by explicitly aligning RFQs and supplier evaluations to AS9100, ISO 9001, and ITAR.

Key items to request or confirm:

Certifications and scope

- Current AS9100 certificate, including site(s) covered and scope relevant to busbar design/manufacture.
- ISO 9001 certificate and alignment of the QMS across all production areas involved.
- ITAR registration/statement of ITAR compliance where defense programs are involved.

Quality and traceability controls

- Material traceability back to mill certs and lot numbers where required by program.
- Configuration control for drawings, ECNs, and revisions, with documented change management.
- Inspection plans, FAI/PPAP or AS9102 first article capabilities, and test reporting.

Supply chain and special processes

- Approved supplier list management, including any NADCAP or equivalent special-process providers, if applicable.
- Control of plating, soldering (e.g., J-STD-001 where relevant), insulation, and assembly processes to aerospace requirements.

ITAR handling

- Written procedures for handling controlled technical data and restrictions to U.S. persons.
- How digital files (drawings, CAD, Gerbers) are stored, shared, and dispositioned at end of life.

Program and engineering support

- Ability to support design for manufacturability, thermal and current carrying considerations, and packaging constraints early in the design cycle under controlled processes.

Typical busbar-related questions to ask suppliers

Question for supplier	Why it matters (AS9100/ISO/ITAR linkage)
Are you currently certified to AS9100 and ISO 9001, and what is the scope?	Confirms the QMS is audited and applies directly to busbar manufacturing.
Do you have ITAR registration or a formal ITAR compliance program in place?	Ensures controlled handling of defense articles and technical data.
How do you maintain configuration control and manage drawing revisions?	Reduces risk of wrong revision builds reaching production.
What level of material and process traceability can you provide?	Supports rigorous quality requirements and failure investigations if required.
Which special processes are in-house vs. outsourced, and how are they qualified?	Ensures all processes and materials meet requirements.

Storm Power Components Meets and Exceeds These Requirements

Storm Power Components focuses specifically on busbars and power distribution assemblies, and its quality and compliance posture is aligned with aerospace and defense expectations.

Storm Power addresses AS9100, ISO 9001, and ITAR needs in the following ways:

Dual-certified aerospace QMS

Storm's Quality Management System is dual certified to ISO 9001:2015 and AS9100:D, covering its busbar manufacturing operations for aerospace and defense applications. This integrated system uses layered quality gates and documented controls to ensure busbars are manufactured consistently, within specification, from lot to lot.

ITAR and industry-specific compliance

Storm is identified as ITAR certified/ITAR compliant for busbars involved in defense programs listed on the U.S. Munitions List. Storm also handles EAR controlled parts. The company also adheres to relevant industry standards such as J-STD-001 soldering and NADCAP-qualified processes through its supply chain where program requirements demand them.

Traceability, documentation, and process control

Storm's QMS emphasizes process control, traceability, and documentation, enabling customers to obtain records that align with AS9100 and ISO 9001 expectations (e.g., inspection results, nonconformance handling, and repeatable build processes). Integrated quality checkpoints throughout manufacturing support first article builds, engineering changes, and long-term production with consistent documentation.

Alignment with aerospace and defense environments

Storm explicitly positions its certifications and processes around the needs of aerospace and Department of Defense programs, including harsh-environment performance and regulatory compliance. For procurement teams, this means a single busbar partner that can support commercial, aerospace, and defense programs under the same audited system, reducing qualification and onboarding effort.

By focusing on a certified aerospace QMS, documented ITAR compliance, and robust process control for busbar manufacturing, Storm Power Components provides a framework that aligns with what AS9100, ISO 9001, and ITAR-driven procurement teams expect from a strategic power-distribution supplier.

