

BASIC REQUIREMENTS

Seller shall fully comply with all requirements of this document in effect as of the date of the Request for Quote (RFQ). No deviation, substitution, or omission shall be permitted unless expressly authorized **in writing** and mutually agreed upon by both buyer and seller **prior to acceptance of the purchase order (PO)**. In the event of any conflict between this document and other seller documentation, the requirements of this document shall take precedence unless otherwise agreed in writing by the buyer.

1. Quality Management System Requirements

- a. Suppliers shall maintain an effective quality management system (QMS) that ensures consistent conformance to requirements.
- b. Preference is given to suppliers certified to AS9100, AS9110, AS9120, or ISO 9001.
- c. Suppliers without certification may be subject to additional oversight including surveys, audits, or product validations.
- d. Suppliers must notify the organization immediately of any suspension, revocation, or major change to their quality certifications.
- e. Suppliers are responsible for ensuring QMS requirements are flowed down to any sub-tier providers involved in fulfilling the contract.

2. Right of Access

- a. The supplier shall grant access to:
 - i. The purchasing organization, its customers, and applicable regulatory authorities.
 - ii. All facilities, processes, records, and personnel involved in fulfilling the order.
 - iii. This right shall be preserved throughout the duration of the purchase order and for any retention period defined.

3. Nonconforming Product and Process Control

- a. The seller shall not supply known defective material without prior approval from the buyer.
- b. All nonconforming material or processes shall be reported immediately upon detection.
- c. Product disposition such as use-as-is, rework, or repair shall not proceed without formal written approval from the buyer.
- d. Suppliers are responsible for containment, root cause analysis, and corrective action where applicable.
- e. Records of nonconformances and corrective actions shall be maintained and made available upon request.

4. Product and Process Changes

- a. By acceptance of this order, the supplier agrees to inform the buyer immediately in writing, of any proposed changes which affect fit, form, function, reliability, weight, or any other specified requirement of the items on this Purchase Order. All such changes shall be submitted to the buyer on the supplier's normal change control format for approval prior to implementation. The buyer will reply in writing on the acceptability of the proposed changes
- b. Suppliers shall obtain prior written approval before implementing changes to:
 - i. Product design (if design authority is held), Materials, Manufacturing methods, Sub-tier suppliers, Manufacturing location, or key equipment affecting critical characteristics.
 - ii. Unauthorized changes may result in product rejection, contract termination, or supplier disqualification.

5. Flowdown of Requirements

- a. Suppliers shall ensure that all applicable requirements including customer, legal, and regulatory are:
 - i. Communicated and flowed down to all sub-tier suppliers.
 1. This includes special characteristics, key process parameters, testing requirements, and any applicable regulatory standards (DFARS, REACH, RoHS, etc.).
 - ii. Suppliers are responsible for verifying sub-tier compliance and maintaining documented evidence.

Reference the link below for CW “Appendix A – Government Flow-down Clauses”

[Appendix A - Government Flow-down Clauses | Curtiss-Wright Defense Solutions](https://www.curtisswrightds.com/resources/appendix-government-flow-down-clauses)

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6. Record Retention and Documentation

- a. Suppliers shall:
 - i. Retain quality records for a minimum of 10 years or as otherwise specified in the PO. Examples include inspection reports, certifications, test data, and traceability records.
 - ii. Ensure records are legible, readily retrievable, and protected from damage or loss.
 - iii. Make records available for review by the organization, its customers, or regulatory agencies upon request.

7. Calibration and Measurement Control

- a. The seller shall maintain a system for calibration and maintenance of tools, jigs, inspection and test equipment that is compliant with an industry-recognized standard (e.g. ISO 17025, ISO 10012-1, ANSI Z540) or to manufacturers recommendation.
- b. When applicable, suppliers must ensure that:
 - i. Monitoring and measuring equipment is calibrated at defined intervals using standards traceable to one of the industry standards listed above
 - ii. Each device used in final acceptance or process control is identified with calibration status, including due dates.
 - iii. Measurement systems are protected from damage, misuse, environmental degradation, and unauthorized adjustment.
 - iv. If an out-of-tolerance instrument is discovered, an impact assessment on previously inspected parts shall be conducted, and the buyer shall be notified immediately.
- c. The supplier shall provide a Certificate of Calibration for equipment purchased or rented on the Purchase Order. The certificate shall include:
 - i. the description and unique identification of the equipment
 - ii. the date of calibration
 - iii. the results obtained
 - iv. the recommended calibration interval
 - v. the designated limits of permissible error
 - vi. the source used to obtain traceability
 - vii. relevant environmental conditions
 - viii. a statement of uncertainties and their cumulative effect
 - ix. details of maintenance or service performed
 - x. limitations of use
 - xi. identification of person who performed the calibration
 - xii. identification of related calibration certificates other relevant documents

8. Counterfeit Parts Prevention

- a. Seller shall establish and maintain a counterfeit prevention control plan in accordance with AS5553, ARP6328, AS6496, DFARS 252.246-7007, IDEA-STD-1010, DFARS 252.246-7008, AS6174, AS6081 or AS6171 as applicable.
- b. For parts/materials to be delivered to the buyer, the Seller shall only purchase from authorized sources of supply.
 - i. Authorized Sources of Supply include: The Original Equipment Manufacturer (OEM) of the parts/materials including mills and foundries, authorized aftermarket manufacturers, or authorized distributors.
- c. Suppliers shall:
 - i. Implement processes to prevent the use or delivery of counterfeit or suspect counterfeit parts.
 - ii. Maintain control of supply chains to ensure traceability to the original manufacturer or authorized distributors.
 - iii. Notify the organization immediately if counterfeit risk is identified or suspected.

9. Personnel Awareness & Ethical Conduct

- a. Suppliers shall ensure that all employees involved in processing or handling the organization's orders are aware of:
 - i. Their contribution to product conformity
 - ii. Their role in ensuring product safety
 - iii. The importance of ethical behavior, including the reporting of unethical practices, falsification of records, or deliberate process violations.
- b. Training should be documented and provided at appropriate intervals.

10. Verification, Inspection, and First Article Requirements

- a. The buyer reserves the right to perform source inspections, witness test activities, or review first articles at the supplier's facility.
 - i. The supplier shall notify the Buyer of the date when the goods will be ready for Inspection/Test, giving at least five working days advance notice. If upon arriving at the supplier's facility on the given date the goods are not ready for Inspection/Test, the supplier shall be liable to cover any additional costs incurred by CW-DSD as a result of the supplier's non-readiness.
- b. Suppliers shall comply with AS9102 First Article Inspection (FAI) when required and ensure submission of complete and accurate FAI reports.
 - i. All First Article and Partial First Article Inspection reports shall be prepared and submitted to the Buyer.
 - ii. First Article Inspection shall be required for any of the following:
 1. New part representative of the first production run.
 2. Change in the design affecting the fit, form, or function of the part.
 3. Change of the location point of manufacture or other changes that can potentially affect the fit, form, and function of the part including but not limited to, changes of the manufacturing source(s), process(s), tooling or materials.
 4. Natural or man-made event which may adversely affect the manufacturing process.
 5. Lapses in production for two years or as specified by the Company.
 6. Supplier can utilize Qualification units to complete the AS9102 report, in the event changes occur from qualification units to production units a delta AS9102 FAI shall be required and submitted to the Buyer.
 - iii. Additionally, the Company reserves the right to require an AS9102 FAI from the Supplier when any of the following occurs:
 1. The Company Customer contract requirement
 2. When a partial FAI is triggered per AS9102 requirements, or

3. As deemed necessary by the Company based on poor historical performance or risk
- c. Suppliers shall ensure their processes are capable of detecting and preventing escapes before product delivery.

11. Test and Inspection Requirements

- a. The supplier shall provide test and inspection data with each shipment which shall include:
 - i. The Purchase Order number
 - ii. The part number and revision level
 - iii. Traceability to specific items or lots
 - iv. Approval by the supplier's authorized representative

12. Certificate of Conformance

- a. Shipments made against this Purchase Order must be accompanied by a Certificate of Conformance, attesting that all the applicable specifications, drawings, and Purchase Order requirements have been met.
- b. The C of C must contain the following as a minimum:
 - i. The Purchase Order number
 - ii. Part number and revision level (rev level if item is revision controlled)
 - iii. Quantity shipped
 - iv. Approval by the supplier's authorized representative
 - v. The manufacturers lot (batch or serial number) and the date of manufacturer's (date code) for each unique item that the C of C pertains to. (Exemption to this requirement is acceptable for connector)

13. Part Marking

- a. Unless otherwise specified on the drawing each part shall be identified with a unique serial number traceable to its production lot records.
- b. Each part shall be marked with a manufacturer's date code traceable to its production lot record. If it is not practical to mark the part, the lowest order packaging shall be marked with the date code. (Exemption to this requirement is acceptable for connectors).
- c. The supplier shall maintain records providing traceability to the batch or lot number, the date or manufacture and the name of the manufacturer of raw metal stock utilized in the production of the item delivered. These records must be available for examination by CW-DSD upon request.
- d. All removable chassis piece parts are to be identified with a serialized date code, marked adjacent to the part number.

14. Workmanship

- a. **General Workmanship Requirements:**
 - i. All delivered products shall meet high standards of workmanship and be free from defects that could affect fit, form, function, safety, reliability, or performance. This includes, but is not limited to:
 1. Burrs, dents, nicks, scratches, corrosion, and foreign object debris (FOD)
 2. Misaligned components or fasteners
 3. Incomplete processing or poor finish quality
 4. Unacceptable solder joints, cracks, or voids
 5. Workmanship requirements apply whether the product is manufactured, assembled, or processed in-house or by a sub-tier supplier.
- b. **Electronic Assemblies**
 - i. Unless otherwise specified on the drawing, all electronic assemblies (PCBs, harnesses, control boxes, etc.) shall comply with the latest revision of the following IPC standards.

- ii. IPC-A-610 Class 3 – Acceptability of Electronic Assemblies
 - iii. IPC J-STD-001 Class 3 – Requirements for Soldered Electrical and Electronic Assemblies
 - iv. IPC/WHMA-A-620 Class 3 – Requirements and Acceptance for Cable and Wire Harness Assemblies
 - v. IPC-A-600 Class 3 – Acceptability of Printed Boards (for bare boards, if applicable)
- c. Machined Parts and Fabricated Metal Components**
- i. Unless otherwise specified on the drawing all machined, turned, or fabricated mechanical parts; the following applies:
 - 1. Surface finish must meet drawing requirements. If not specified, default to Ra 63 μin (1.6 μm) unless otherwise agreed.
 - 2. Parts shall be free of burrs and sharp edges. All edges shall be broken with a radius or chamfer of 0.005"–0.015" (0.13–0.38 mm) unless otherwise specified.
 - 3. Threads must be clean and gauged with appropriate GO/NO-GO thread gauges.
 - 4. No visible tool marks on functional surfaces unless called out as acceptable.
 - 5. Internal features (e.g. bores, grooves) shall be verified with suitable gaging equipment.
 - ii. Dimensional conformance shall be supported with inspection reports as applicable.
 - iii. Visual standards may follow ANSI/ASME Y14.5, AS9102, or customer-defined criteria.
- d. Plating, Coating, and Surface Treatment**
- i. Where plating or coating is performed and not fully defined on the drawing, the supplier shall ensure conformance to the following applicable standards:
 - 1. Coatings must be uniform, adherent, and free from blisters, pitting, discoloration, or flaking.
 - 2. Base material condition shall be suitable for coating (no excessive roughness, contamination, or corrosion).
 - 3. Plating thickness must be verified and recorded when specified.
 - 4. Suppliers must prevent hydrogen embrittlement where applicable (e.g., on high-strength steels after electroplating), following post-bake requirements per the applicable specification.
 - ii. Default Industry Standards apply unless otherwise stated:
 - 1. Zinc plating: ASTM B633, Type II, SC 2 or as specified
 - 2. Nickel plating: AMS 2403 or AMS QQ-N-290
 - 3. Anodize: MIL-A-8625 Type II or Type III
 - 4. Chromate conversion: MIL-DTL-5541, Class 1A or 3
 - 5. Passivation: ASTM A967 or AMS 2700 for stainless steel
 - 6. Chemical film: per drawing or MIL-DTL-5541
 - 7. Powder coating or paint: per applicable MIL or customer standard
- e. Additional Requirements**
- i. If no workmanship standard is stated on the drawing or PO, these flowdown requirements shall apply by default.
 - ii. Suppliers must document and maintain internal inspection and process controls to ensure workmanship compliance.
 - iii. Any deviation must be submitted in writing for approval prior to shipment.
 - iv. Evidence of inspection (e.g. photographs, inspection reports) may be required upon request.

15. Material Handling & Packaging Flowdown Requirements

a. General Requirements – All Product Types

- i. All suppliers are responsible for ensuring that product is handled and packaged in a manner that:
 - 1. Prevents damage, degradation, corrosion, contamination, or electrostatic discharge (ESD).
 - 2. Protects all critical surfaces, threads, connectors, and finishes from contact damage or deformation.
 - 3. Ensure products remain clean, dry, and protected during internal processing and while in transit.

4. Comply with foreign object debris (FOD) prevention practices appropriate to the product type.
 5. Clearly identifies product and maintains traceability throughout storage and shipment.
 - ii. Where customer or drawing-specific packaging instructions exist, they take precedence over the requirements in this document.
 - iii. Delivery is made in accordance with contractual due dates. Early or late shipments must be pre-approved in writing.
 - iv. On-time delivery and quality performance are monitored as part of the supplier performance evaluation program.
- b. Electronic Components (semiconductors, passive devices, ICs, etc.)**
- i. Suppliers of electronic components shall meet the following:
 1. Components must be shipped in manufacturer-original, unopened, and sealed packaging unless otherwise authorized. If repackaging is necessary (e.g. for re-kitting or partial lots), components must be:
 - a. Packaged in ESD-safe bags, tubes, or trays.
 - b. Labeled with part number, lot/date code, quantity, MFR, and shelf life, where applicable.
 - c. Accompanied by certificates of conformance (CoC) and traceability to the OEM or authorized distributor.
 2. ESD-sensitive devices must be handled, stored, and packaged in accordance with:
 - a. ANSI/ESD S20.20 and JEDEC JESD625, or equivalent.
 3. Moisture-sensitive devices must follow J-STD-033 for packaging and humidity indicators.
 4. Humidity indicator cards and desiccant packs must be included if applicable.
 5. Counterfeit prevention measures must be in place during sourcing, handling, and shipping.
- c. Electronic Assemblies (PCBAs, CCAs, harnesses, box build, etc.)**
- i. Packaging and handling requirements for completed electronic assemblies include use of anti-static bags, ESD-safe foam, or trays for all products with electrical contacts, boards, or circuitry.
 - ii. Products must not be placed in direct contact with cardboard or paper unless ESD shielding is ensured.
 - iii. Assemblies must be secured within packaging to prevent shifting or vibration during transit.
 - iv. Products shall be individually packaged or protected with physical dividers when multiple units are shipped in a single box.
 - v. For wire/cable harnesses:
 1. Route and secure to prevent kinking, bending, or abrasion.
 2. Cover connectors with protective caps or plugs to prevent contamination and mechanical damage.
 - vi. Each package must be labeled with part number, revision, quantity, PO number, warning labels for ESD, moisture sensitivity, fragile items when relevant, and orientation if applicable.
- d. Mechanical Parts and Assemblies (machined parts, sheet metal, hardware, etc.)**
- i. Handling and packaging of mechanical parts and assemblies shall meet the following:
 1. All parts must be cleaned of cutting fluids, chips, and contaminants prior to packaging.
 2. Delicate features (threads, O-ring grooves, sealing surfaces, etc.) must be protected with caps, plugs, or covers.
 3. Sharp edges must be protected to prevent injury or damage to adjacent parts.
 - ii. Finished/coated/plated surfaces must be wrapped or bagged using non-abrasive materials (VCI paper, bubble wrap, poly bags).
 - iii. Components shall not contact each other directly unless isolated by dividers, or custom foam inserts.
 - iv. Hardware kits or small components shall be bagged and labeled, with counts verified and traceable.
 - v. Packaging must be sturdy enough to withstand normal handling and transit conditions.

- vi. Export-controlled parts shall be packaged in compliance with ITAR/EAR and marked appropriately.
- e. Palletization and Shipment**
 - i. For bulk or large-quantity shipments boxes and containers must be sealed, labeled, and stacked safely to avoid compression or toppling.
 - ii. Heavy items shall be secured to pallets using straps or shrink-wrap and cushioned against shock or vibration.
 - iii. Mixed-part shipments must include segregation and clear labeling to avoid cross-contamination or mix-ups.
 - iv. Any special handling instructions (temperature limits, fragile, orientation-sensitive, ect.) must be clearly marked.
- f. Documentation & Labeling Requirements**
 - i. Each shipment shall include:
 - 1. Packing slip with: part number, description, revision, quantity, PO number, and line item
 - 2. Certificate of Conformance (CoC)
 - 3. Any required material certifications, test reports, FAI, or special process certifications
 - 4. Labeling on outer box matching PO information and including any necessary warnings or traceability tags

16. Language

- a. Seller documents and records submitted to Buyer shall be in English.

17. Government-Industry Data Exchange Program (GIDEP) Membership

- a. If Seller is eligible for GIDEP membership, Seller is required to be a member of GIDEP.
- b. The Seller shall implement a process for reviewing and evaluating problems identified in GIDEP alerts.

18. Foreign Object Damage (FOD) Prevention

- a. Seller shall maintain a FOD Prevention Program compliant to AS9146, Foreign Object Damage (FOD) Prevention Program - Requirements for Aviation, Space and Defense Organizations.
- b. Whenever or wherever Foreign Object Debris (FOD) can be entrapped or Foreign Objects (FO) can migrate, Seller shall ensure that applicable FOD prevention requirements are flowed down to Seller's subcontractors at every tier.
- c. Prior to closing inaccessible or obscured areas and compartments during assembly, Seller shall inspect for FO/materials and ensure no protective devices (e.g. bags, caps, covers, plugs) remain embedded. Seller shall ensure tooling, jigs, fixtures and test or handling equipment are maintained in a state of cleanliness and repair sufficient to prevent FO and FOD.
- d. By delivering Items to Buyer, Seller shall be deemed to have certified to Buyer that such Items and packaging are free from any FO/FOD.

19. Corrective Action, Preventive Action, Request and Reporting

- a. Seller shall maintain an efficient and effective corrective action system that prevents shipment of nonconforming products without prior written approval from Buyer
- b. When Corrective Action is Required**
 - i. A Seller Corrective Action Request (SCAR) may be issued under the following conditions:
 - 1. Product nonconformance affecting form, fit, function, reliability, safety, or regulatory compliance
 - 2. Repetitive quality issues or nonconformance trends
 - 3. Late delivery, incomplete documentation, or packaging issues
 - 4. Audit findings (internal, external, or customer-led) requiring formal resolution

5. Receipt of suspected counterfeit parts, improper material substitutions, or special process failures
6. Any issue requiring containment, root cause analysis, and systemic corrective action

c. Supplier Responsibilities

- i. Due within seven (7) calendar days of SCAR issuance:
 1. Acknowledgement of receipt of the SCAR
 2. Statement of containment actions including the disclosure of any previous escapes found during supplier's investigation
- ii. Due within thirty (30) calendar days of SCAR issuance:
 1. Investigation Status
 2. Root Cause Analysis
 3. Corrective Action
 4. Preventive Action
 5. Objective Evidence –provide photos, updated procedures, training logs, etc.

d. Containment

- i. Containment implementation shall:
 1. Immediately isolate and prevent further shipment of suspected or nonconforming product.

e. Root Cause Analysis, Corrective Action, and Preventive Action

- i. Root Cause Analysis and Corrective Action (RCCA) should be conducted under a structured root cause investigation using tools such as:
 1. 5 Whys
 2. Ishikawa (fishbone) diagrams
 3. Fault tree analysis (FTA)
- ii. Identification of Root Cause shall include both why the non-conformance was made (why made) and why the non-conformance was missed (why missed).
- iii. Corrective and Preventive action shall include actions take to address both why made and why missed.

f. Submission Format

- i. SCAR responses shall be submitted using the format provided by the customer or in a format that used by the supplier. If the response is submitted in the supplier format, the response shall include:
 1. Nonconformance description and reference number
 2. Immediate containment actions
 3. Root cause analysis
 4. Corrective/preventive actions
 5. Verification of effectiveness
 6. Supporting evidence (photos, inspection reports, CAP logs)

g. Timelines

- i. Unless otherwise agreed, supplier shall comply with the target timelines listed in “Supplier Responsibilities”
- ii. Extensions may be granted upon request but must be submitted before due dates lapse.

h. Failure to Respond

- i. Failure to respond to a SCAR in a timely or effective manner may result in:
 1. Escalation to senior management
 2. Supplier probation or disqualification
 3. Withholding of future purchase orders
 4. Chargebacks for rework, sorting, or customer impact
 5. Formal supplier corrective action rating impact

Standard Curtiss-Wright Terms and Conditions can be found at the following link:

[Customer and Supplier Information | Curtiss-Wright Defense Solutions](https://www.curtisswrightds.com/about/customer-and-supplier-information)

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